

Home Computing WEEKLY

An Argus Specialist Publication

EVERY WEEK:
More software
reviews than any other
magazine

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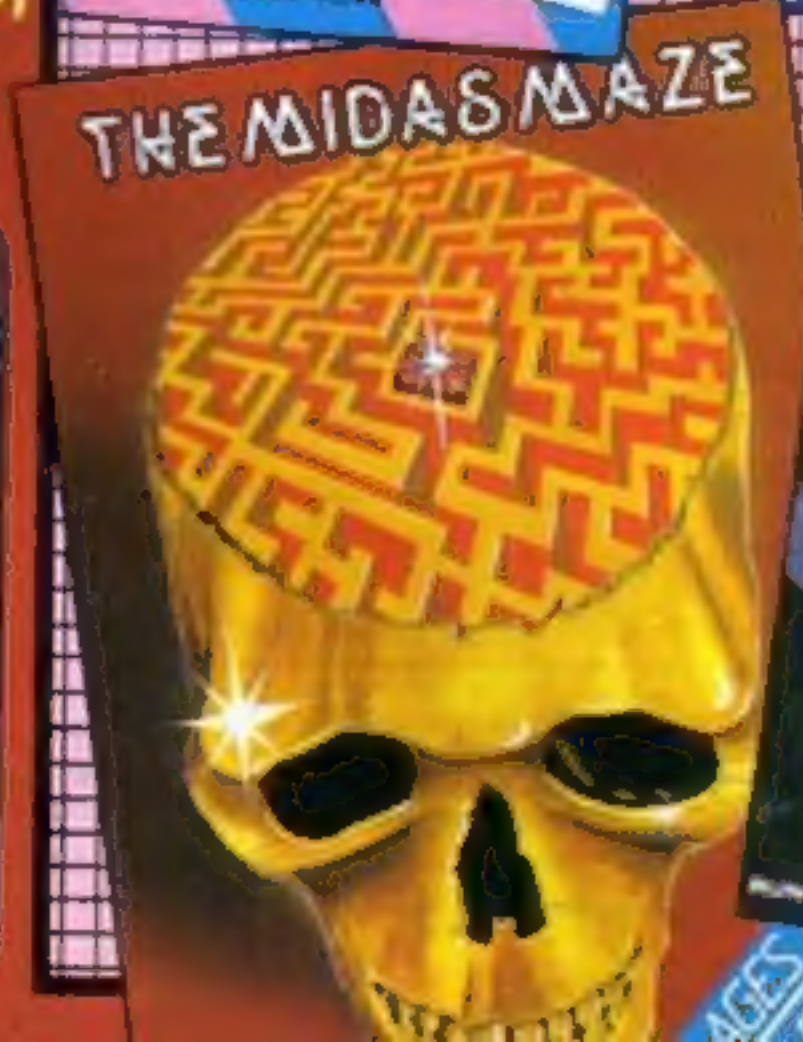
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Software reviews for: Spectrum, BBC, Atari, Oric, Dragon, TI-99/4A, Commodore 64

Two pages of your letters

Programs to type in for: Dragon, VIC-20, Spectrum, Oric, Atari, Texas



Make a date with a micro

Now your computer can find the love of your life... and work out the good and bad points of your partnership.

Both use questions devised by experts, including a psychiatrist who has written quizzes for women's magazines.

The Dating Game and I Do cost £12.65 each for the BBC and Electron computers and are each on two cassettes in video cassette-style boxes.

Both were devised and written by Ivan Berg Software and are being marketed by Acornsoft.

The Dating Game, which is four separate programs, is based on a book by Dr Glen Wilson, of the University of London's Institute of Psychiatry.

Designed to hold data on up to 40 people, it asks 19 questions. Among them: should men and

Continued on page 5

Giant's step into the home

How will IBM's newly-announced home computer fare when it reaches us from America?

A leading London IBM dealer describes the move as "exciting", but Commodore's UK marketing manager says he has serious doubts.

The PC Junior, on sale in the US early next year, has a fast 16-bit processor and a 62-key cordless keyboard which controls the main unit with an infra-red beam.

There are two models:

continued on page 6

ocean

TWO NEW RELEASES

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and

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home computer:
the first pictures



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London SW15 6NU

**Program with
the less
fattening
centre**

Who said chips were fattening? Well, the ones in your Spectrum aren't, especially when you use them to run *Dieta*, a new calorie-counting program from a company of the same name.

Dieta will calculate the calorie and fibre content of any dish, but that's not all. It will work out which ingredients in a recipe contribute the most calories, and tell you how to adjust the recipe accordingly.

It will also suggest alternative low-calorie ingredients that you can use instead of fattening ones.

Dieta will work with recipes of up to 16 ingredients, and the makers say it has been tested on over 30 different recipes from four different countries!

If you have a printer, you can print out list of ingredients and calories and fibre content.

A ZX81 version is due out soon. The Spectrum version costs £5.

Dieta, 14 Ribble Close, Culcheth Warrington WA3 5EA

Audiogenic has brought out a bumper selection of programs in time for Christmas shoppers. They include a Big Six games pack for the Dragon, costing £5.95; two dual-program cassettes, with a VIC-20 game on one side and a Commodore 64 version on the other; three new games on cartridge and one on disc for the 64, plus six cassette-based games; and two new VIC titles.

Audiogenic, PO Box 88, Reading

You could win a computer or joysticks for Christmas if you buy a *Galactic* game. Each game carries an entry form, and all you have to do is guess the lucky number. Nearest guesses to the number win 20 Commodore 64s, and 100 runners-up will get games joysticks. *Galactic* sell software for the VIC-20, Commodore 64 and Dragon. Latest release: *Games Designers* for the VIC-20 and 64, which allow you to make up your own machine-code computer games. They cost £9.50 and £11.50 respectively.

Galactic Software, Unit 7, Lurchfield Estate, Dowlish Ford, Ilminster, Somerset TA19 0PF

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What does IBM's new home computer look like? Details and pictures are on page 6



Money problems? Our Dragon program, which starts on page 19, will look after your finances

**BUG-BYTE
SOFTWARE**

Turn to page 15 and find out how you stand a chance of receiving a Bug-Byte T-shirt



There are two great Spectrum programs in this issue. They start on pages 32 and 44

ANIROG

SOFTWARE



MISSILE DEFENCE

MISSILE DEFENCE

Brings the well known arcade game to life on the Spectrum screen in glorious colours. Defend your cities from the missile attack and smart bombs. 10 skill levels.

KB/JS 16K/48K £5.95

SLAP DAB

An exciting game based on the arcade game Painter which combines fast action with strategy. Giant insects hiding under the old paint surface are released by your paint brush. You require fast action and quick thinking to outwit them and finish the panel. The game is 100 percent machine code and HI-RES. Graphics also includes Hi-score and running score.

KB/JS 16K/48K £5.95

GALACTIC ABDUCTORS

A stunning action packed game with superb large animated graphics. Giant Space Hawks whirl and weave in intricate patterns as they drop their deadly homing mines which will destroy your base on contact. While you are busy defending yourself the Hawks will feed on your helpless population returning only their skulls. All MC game complete with high score table that will blow your mind with its graphics and sound effects.

KB/JS 16K/48K £5.95

FROGRUN

Popular arcade game. All machine code with brilliant colour graphics and sound effect. Features include snakes, crocodiles, lady frogs, turtles, cars, lorries and logs.

KB/JS 16K/48K £5.95

TINY TOT'S SEVEN

Super games pack for younger children with bright colour graphics and sound effects. Everybody's favourite Simon plus Super Snap O's and X's, Word Jumble, Bomber, Duck Shoot and Mad Drivers.

KB 16K/48K £4.95

AVAILABLE SEPT. 1983

KONG KB/JS £5.95
XENO II KB/JS £5.95

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Make a date

From front page

women be equal? What do you think about sex? and questions on the food you like and your hobbies and pastimes.

Acornsoft's managing director, David Johnson-Davies, 29, said: "You obviously can't run it as a commercial enterprise — 40 people wouldn't be enough. It's really designed for parties and among friends. We are going to

Show in the New Year

If you're getting a new micro for Christmas, or just planning how to spend those Christmas postal orders, make a note in next year's diary to keep 6-8 January free.

That's when Argus Specialist Exhibitions — owned by the same company that owns HCW — will be holding its 1984 London Home Computer Show, in the Royal Horticultural Society's New Hall.

There will be a range of hardware and software on display for you to try and buy, and the larger New Hall will provide space for more stands than ever before.

The Horticultural Hall is off Westminster's Victoria Street.

The show will be open from 10am to 6pm, except on Sunday, when it closes at 4pm. Admission is £2, or £1.50 if you're under 16.

Argus Specialist Exhibitions, Wolsey House, Wolsey Road, Hemel Hempstead, Herts. HP2 4SS

Seasonal software

You can send your BBC B-owning friends a Christmas card with a difference this year.

Elm Computers has brought out a range of three computer Christmas cards on cassette. Load them into the BBC, and they display an animated Christmas scene, complete with musical accompaniment.

One card features a snowman, another a forest with Santa travelling through it, and the third shows night falling and a house whose windows gradually light up.

Andrew Jones, who wrote the programs last summer, said he first had the idea while sitting on a beach on holiday in France.

Elm Computers will be following up the cards with a range of machine-code games. Meanwhile, the cards cost £2.50 each or £7 for three.

Elm Computers, 59 Bateman Road, East Leake, Loughborough, Leics.

try it at our Christmas party.

"I've run through it myself... but I haven't tried dating with it."

I Do uses questions from psychologist Hans Eysenck's book *I Do: Your Guide to a Happy Marriage* and has eight questionnaires — a total of 400 questions — on subjects like personality, sexual attraction and compatibility.

At the end bar charts show how the two partners differ.

Both Mr Berg and Mr Johnson-Davies said people were far more honest with a computer than they would be face-to-face, as shown by the Eliza program, well-known in the computer industry.

Mr Berg said: "People will answer a computer with more honesty and less inhibition. We might even have computer therapy programs."

And Mr Johnson-Davies said: "When I've walked up to people using I Do they have quickly put their hands over the screen to hide it from me."

The two programs, due out today, answered the criticism that home computers had no real use apart from games.

More useful programs were on the way, including family quizzes devised by experts — Anthony Holden on the Royal family; Steve Race, of TV's *My Music* quiz; author Brian Aldiss on science fiction. Language teaching was on the way, with each program accompanied by an audio tape.

Could I Do really be taken seriously? He said: "It depends how seriously you take psychiatric tests."

Did he feel like the software industry's cupid for publishing *The Dating Game*? He said: "I don't think these two programs are the start of a trend, just one of many types."

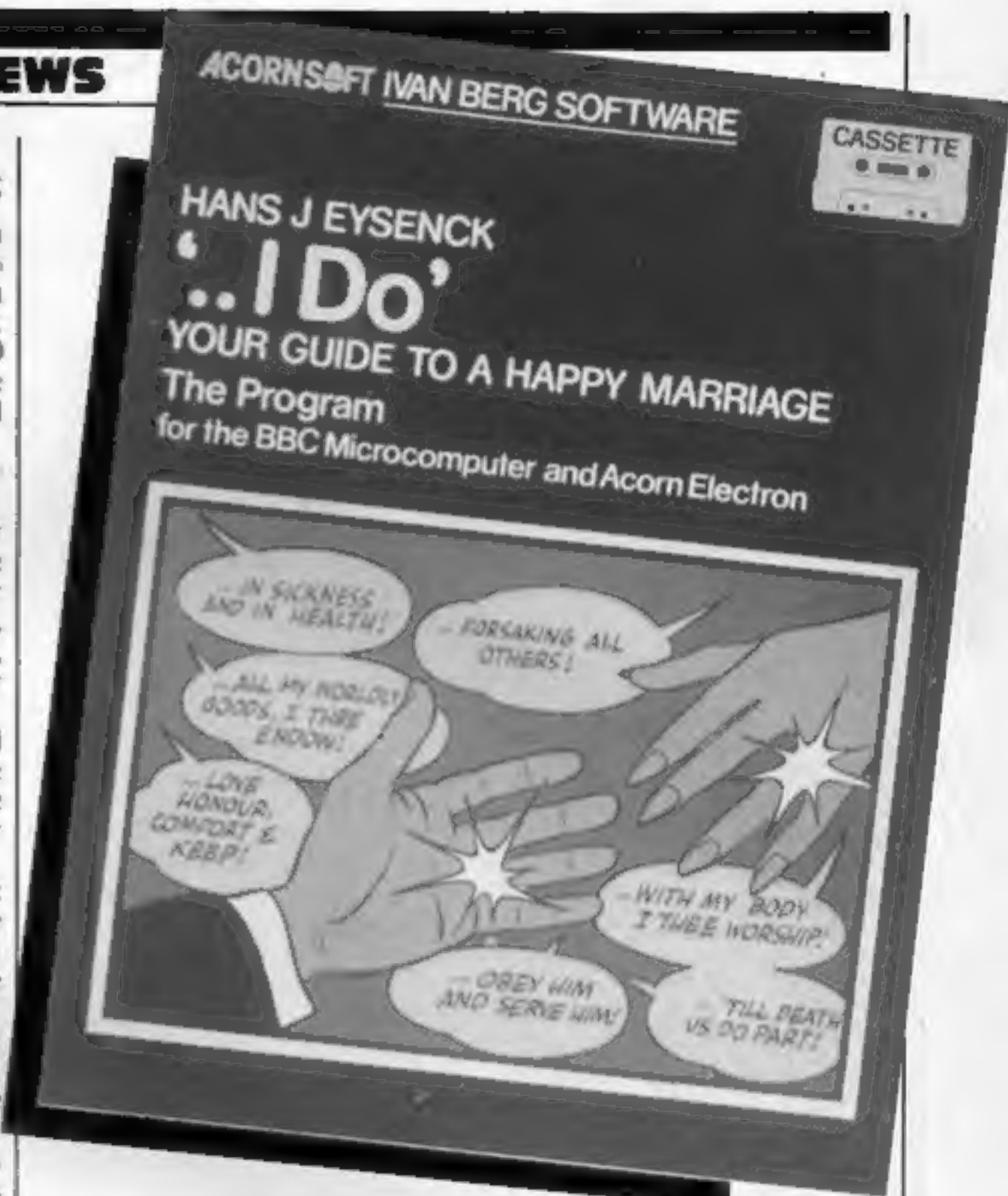
Mr Berg said Dr Wilson had devised quizzes for magazines like *Company* and *Cosmopolitan* and said: "A tremendous number of people do them and find them fascinating."

"We are trying to take the use of the home computer a step further, to allow people to find out more about themselves and the people around them."

It was Mr Berg's company that produced the Eysenck IQ Test for the VIC-20 and Commodore 64.

● Acornsoft has brought a range of 10 teaching programs for the BBC micro — with Electron versions to follow in December — developed by Applied Systems Knowledge. They cost £9.95 and cover age groups from three to 11.

Acornsoft, 4A Market Hill, Cambridge CB2 3NJ



You could be on our pages

We welcome programs articles and tips from our readers.

PROGRAMS should, if possible, be computer printed to a width of 48 characters (use a new ribbon) and/or sent on cassette. Check carefully that they are bug-free. Include details of what your program does, how it works, variables you have used and hints on conversion.

ARTICLES on using home computers should be no longer than 2,000 words. Don't worry about your writing ability — just try to keep to the style in HCW. Articles most likely to be published will help our readers make better use of their micros by giving useful ideas, possibly with programming examples. We will convert any sketched illustrations into finished artwork.

TIPS are short articles, and brief programming routines which we can put together with others. Your hints can aid other computer users.

Competitive rates are paid.

Keep a copy of your submissions and include an SAE if you want them returned. Label everything clearly and give a daytime and home phone number if you can.

Paul Liptrot, Home Computing Weekly, 145 Charing Cross Road, London WC2H 0EE

IBM Junior

From front page

- A 64K RAM version, costing the dollar equivalent of £452. It has 64K of ROM, two cartridge slots, an audio tone generator and, with an adaptor or connector, displays up to 40 columns on a domestic TV or monitor

- The £957 model has twice the RAM, an 87-column display and built-in double-sided 5¼in disc drive for 360K of storage

Both run BASIC on cartridge and IBM says that, with its new disc operating system and disc drive, the Junior will run hundreds of programs written for its highly-successful Personal Computer.

Add-ons for the new models were unveiled at the same time, including a £118 thermal printer, joysticks and a communications device.

And there are more than a dozen new programs, including games, education, word processing, home finance, updated disc-based software and a program for single-keystroke access to Prestel-like services.

IBM reckons a popular home system will be the enhanced model with TV connector, thermal printer, DOS 2.1 and cartridge BASIC. Total price: about £1,090.

The president of IBM's entry systems division, Philip Estridge, said newcomers to computing could use the Junior quickly and people with experience would get quality and versatility.

A program called Keyboard Adventure is built into the Junior's ROM to teach the keyboard. And there are two free discs with the more expensive model to show how it works and give sample programs.

The Junior uses Intel's 8088 processor, and IBM says some adaptor cards have been eliminated by including circuits for things like joysticks, serial port and colour graphics on the main board.

Each key can be user-defined and there are colour-coded function keys. If more than one Junior is being used in the same room, a 6ft cable is needed to replace the infra-red controller.

A second new printer, costing £1,348, uses plain paper up to nearly 15in wide to produce text or graphics in eight colours at a claimed 200 characters per second for drafts, 110 cps for correspondence and 35 cps for letter quality.

IBM has not announced when the new computers will be available in the UK and all prices are direct conversions (\$1.48 equals

£1) of prices at IBM's US product centres.

IBM's Personal Computer went on sale here 17 months after its US launch — although "grey" imports were available earlier. Michael Kraftman, manager of central London IBM dealers Bonsai, hopes it will be sooner this time.

He said: "It sounds an exciting product. The lower-priced model is a bold move. People are going to buy it because it can be easily upgraded... perhaps people who use IBM at work."

"The upmarket version will be very significant. It will be cheaper than the BBC computer with a Torch disc pack."

Commodore's UK marketing manager John Baxter said customers would expect a Rolls-Royce computer from a company with IBM's standing but the Junior would not live up to it.

He said: "IBM is the largest corporation in the world and it can afford to make mistakes. It has supplied industry and governments for years but I don't think they yet understand the home computer market."

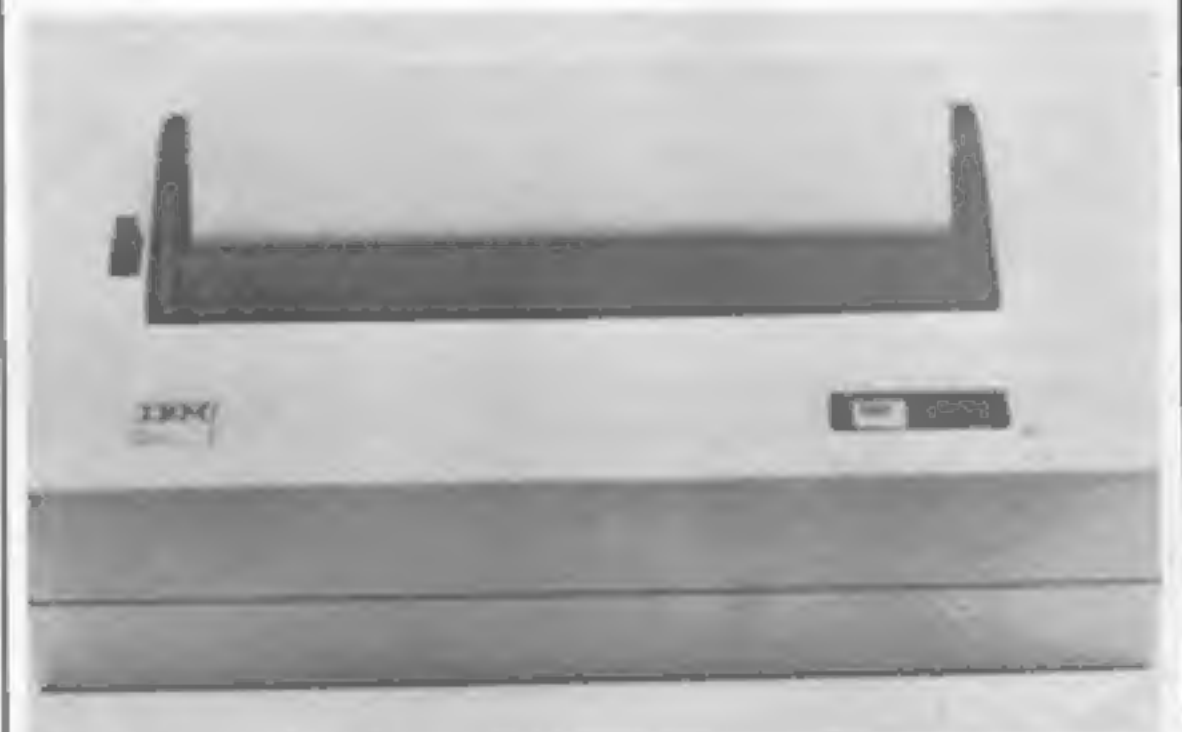
"They will learn and it won't cost them much because they are so big."

As an example, he said, BASIC had to be bought as an extra on cartridge. In fact, he estimated it would cost an added £600 before the Junior could be used.

IBM United Kingdom, PO Box 41, North Harbour (Baltic House), Portsmouth PO6 3AU



Both models of the Junior look the same, but in the cheaper version a blanking plate covers the opening for the disc drive. Below it are two cartridge slots. The round opening is for the infra red control and the grille is for the speaker and for ventilation



Designed for Junior users — IBM's new thermal Compact Printer



IBM's PC Junior with the thermal printer perched on top of the main unit

Software? Look in the Mirror

Mirrorsoft, the software publishing company set up by Mirror Group Newspapers, is launching its first three programs next Monday.

In keeping with the Mirror's image as a family newspaper, Mirrorsoft will be concentrating on programs for all the family, with the emphasis on children's educational software.

It will be selling programs for the BBC B, Electron, Commodore 64 and Spectrum. The programs will be on sale in High Street chains including Boots and Smiths, as well as by mail order offers in the Mirror and other Mirror Group publications.

Rather than having its own in-house programmers, Mirrorsoft will be acting like a book publisher, providing marketing advice and facilities to small software companies.

The companies providing Mirrorsoft's first three offerings are Primer Educational, Andromeda and Widgit.

Primer wrote First Steps with Mr Men, which contains four programs to teach children a range of skills, including first steps in reading.

It uses the Mr Men characters, and includes an illustrated

instruction book and a Mr Men label for the computer's keyboard.

It will be selling for £8.95 for the BBC B and Electron, and will be available on the Spectrum soon.

Mirrorsoft plans to follow up First Steps with the Mr Men by other programs using the Mr Men characters.

Andromeda wrote Caesar the Cat, a children's arcade game. The player has to guide Caesar along shelves to hunt down the mice that are eating plates of food. Price: £8.95 for the Commodore 64.

And from Widgit, profiled in HCW 10, there's Quick Thinking, a package of two arithmetical games for the family.

The first is SumVaders, where you have to do an addition or subtraction before a robot dropped from a space ship can land. The game gets progressively faster, and two people can play.

There's also a facility that allows two players to play each other on different levels, so that a parent and child can compete on equal terms.

The second program in Quick Thinking is Robot Tables. Lumps of robot-making material roll on to a conveyor belt, and to make a good robot you have to say whether the number on each lump is the next in the multiplication sequence.

Tina Detheridge, of Widgit, said of Mirrorsoft: "We've found them very pleasant to deal with — they take an interest at all levels of program development. And they have a very fine educationalist on their team — she really does know her stuff."

"But from our point of view the best thing is that they are giving full credit to the companies who wrote the software."

Versions of the programs for all the machines in Mirrorsoft's range are likely to be out before Christmas, with some new titles scheduled for early in the New Year.

Mirrorsoft hopes to sell at least 100,000 cassettes during its first year.

Briefly

If you think you've written a good flight simulation program, send it off to the Royal Aeronautical Society and you could win £500. There are two categories, one for under-18s and one for over-18s, and school teams as well as individuals are welcome to enter. But hurry — entries must be in by the end of November.

Royal Aeronautical Society, 4 Hamilton Place, London W1V 0BQ

Dial-up software, U.S.-style

When American Telephone and Telegraph (AT&T) was broken up into component companies recently, it advertised that it would have not only a new look, but a new outlook as well. Apparently, they were not kidding.

In a recent announcement, AT&T let it be known that they were entering into a joint venture with Coleco Industries, the well known toy and computer game manufacturer.

Rather than cooperate on a product, the two firms plan to develop a unique subscription service that will allow subscribers to play arcade-quality video games at home via a telephone line modem connection. A special modem is being developed by Bell Labs especially for this purpose.

The plan is for AT&T to be responsible for the communications and billing side of things, while Coleco will provide the games and other entertainment software.

Apparently the plan will enable subscribers to pay for the service on the same invoice as they get for their regular telephone service. No price for this service has as yet been announced.

The service is expected to be operational next year in a few major cities, but plans are in the works to make it available anywhere in the nation.

Although the games will be "interactive" it is not presently known whether the degree of interactivity will allow, for example, a player in one house to play an opponent in another location.

The potential impact of this move by AT&T is not lost on most computer marketing companies. This is AT&T's first indication that they intend to enter the field of telemarketing, and the move is sure to have an impact on the firm's net profit.

This will be especially true if the games can be made highly interactive. The net result will certainly mean more long distance calls, and therefore more revenue. We shall see what happens.

If the trend continues, this year might be remembered as the year of the mouse, at least in the computer world.

Latest company to enter the rodent race, if I may take the liberty to call it that, is none other than the Tandy Corporation. They have now announced a \$49.95 Color Mouse for their Color Computer.

For those few of you who have just come back from a long trip away from civilization, a mouse is, in the parlance of the trade, a device that can be used for rapidly positioning the cursor, instead of using keyboard controls or commands and/or instead of using a joystick controller. As I say, it is all the rage this year over here.

Anyway, the Radio Shack Color Mouse plugs into a joystick port. No announcement has come out as to who was contracted to build the things; it could be any of a dozen mice makers.

The main difference between Tandy's mouse and others, like that for Apple's Lisa or for the IBM PC, is that this one was brought out strictly with entertainment and educational applications in mind.

I might add that the Tandy mouse is about \$150 cheaper than that for the IBM and similarly less expensive than many others.

At the moment, the mouse can only be used with three games, these being Polaris, Rectoids, and Wildcatting. More to the point, it specifically will not work with any more practical program, such as the Tandy spreadsheet program.

The calibration of the unit is obviously not as precise as those available for other more expensive computers, but should meet the requirements of the Color Computer's ability to resolve detail.

One industry observer reports that if nothing else, this product will make people realize there is nothing magical about mice. I wonder what a certain well known mouse named Mickey would have to say about that?

No more space. See you here again next week.

Bob Taen
Fairfield, California

Software goes north

Glasgow's first home computer exhibition took place last Friday, Saturday and Sunday at the Anderston Exhibition Centre — further proof that computing doesn't stop at Watford.

There were over 40 exhibitors at the show, including Menzies, Boots, software companies including Anco, Scotsoft and AR Software, and a number of schools and user groups.

The show saw the launch of the first programs from Screenplay, the software company set up in Glasgow by ex-Silversoft boss David Paterson.

Screenplay is selling software for the BBC, Dragon, Electron and Commodore 64, and its range includes educational and utility programs as well as games.

David said: "When I first moved back to Glasgow from London, I wasn't convinced that I'd be able to get a software company going. But there's a lot of talent up here — a lot of people have computers. I've found loads and loads of good programmers."

"The main drawback is that while in London my accent was fairly distinctive, in Glasgow I sound just like everyone else."

Games

GSH

THE AMAZING ADVENTURES OF THE LAUGHING SHARK PART THREE



FEELING PECKISH, HE WAS TEMPTED BY A MOUTH-WATERING SNACK DANGLING BEFORE HIM. BEWARE MIRTHFUL HERO.....

MMM!! A MACWIMP CRAB-BURGER



IT'S ANGLER AFTER A BITE!

THE LAUGHING SHARK, TIRED OF WET WINDY AND BLACKED-OUT PENG, HEADED FOR SUNNY CLIMES.....



A FLYING SHARK !!!???

FROM HIS TRUSTY TRAWLER, ANGLER NEARLY HOOKED OUR HERO, WHO DECIDED IT WOULD BE SAFER IN THE AIR.....



WRONG AGAIN!! IT'S RIDER PARACHUTING HIS WAY TO A TOP SECRET MISSION TO CHECK OUT MINED ROADS-FIRST HAVING TO LAND ASTRIDE A MOTORBIKE

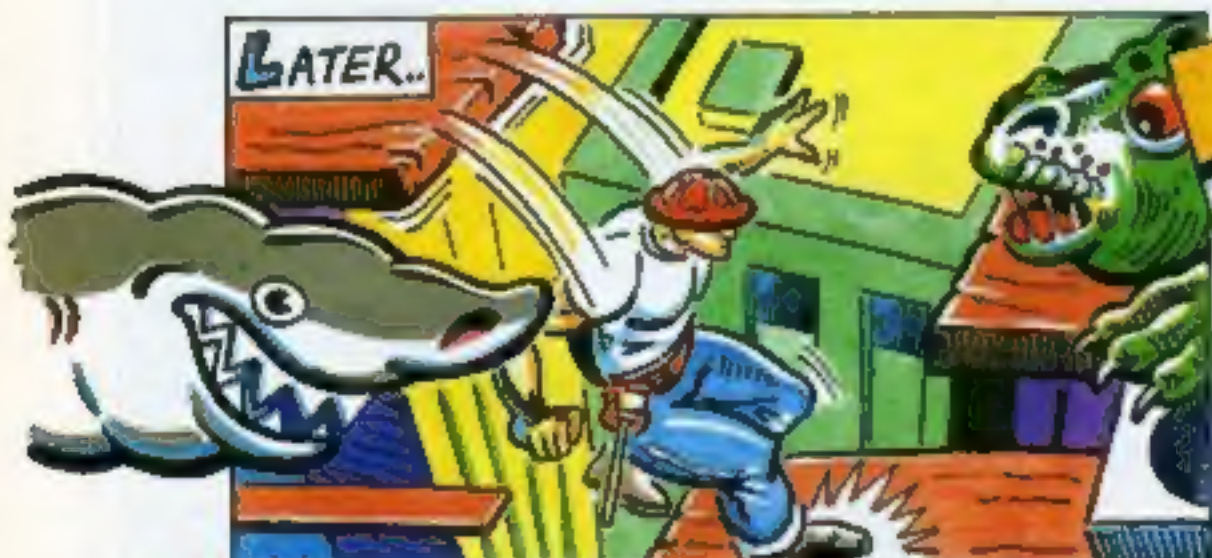
GERONIMO

NO OLD BOY, THE LAUGHING SHARK ACTUALLY.



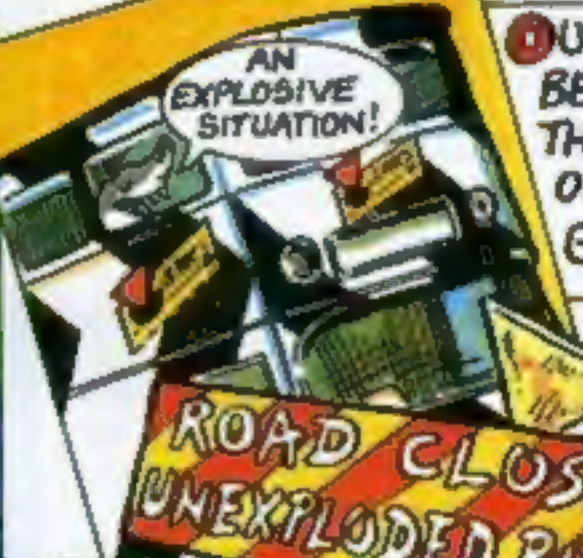
AW NUTS!!

BETTER NOT DISTRACT HIM! ANY MISTAKES COULD PROVE PAINFUL-EVEN FATAL.....



LATER..

HIGH OVER METROPOLIS DISASTER HAS STRUCK. A NEW BUILDING HAS COLLAPSED AND SCAFFOLDING SID'S ONLY HOPE IS TO PLANKWALK TO SAFETY-BUT WATCH OUT FOR MONSTERS!!



AN EXPLOSIVE SITUATION!

ROAD CLOSED UNEXPLODED BOMB

LIFE IN THE AIR IS A LITTLE TOO EXCITING.

OUR HERO WOULD BE BETTER OFF CATCHING THE VIRGIN BUS CHECKING OUT ALL THE FAB NEW GAMES.

TICK TOCK

OH NO! A UXB!! UNLESS THE BOMB DISPOSAL EXPERT CAN FIND THE RIGHT TOOLS TO DIFUSE IT, OUR FISHY FRIEND COULD BECOME SHARK PASTE!!

WATCH OUT for the VIRGIN GAMES FUN BUS - on tour NOW



Angler
by Dirk Olivier
Spectrum 48K
VGC 1012
Fishy fun for all ages - but don't catch a crab!



Rider
by Roy Poole & Terry Murray
Spectrum 48K
VGC 1014
Parachute into the enemy territory and ride the mined roads.



Plankwalk
by Neil Cannon
BBC B
VGA 3008
Can you help scaffolding Sid to stay alive!



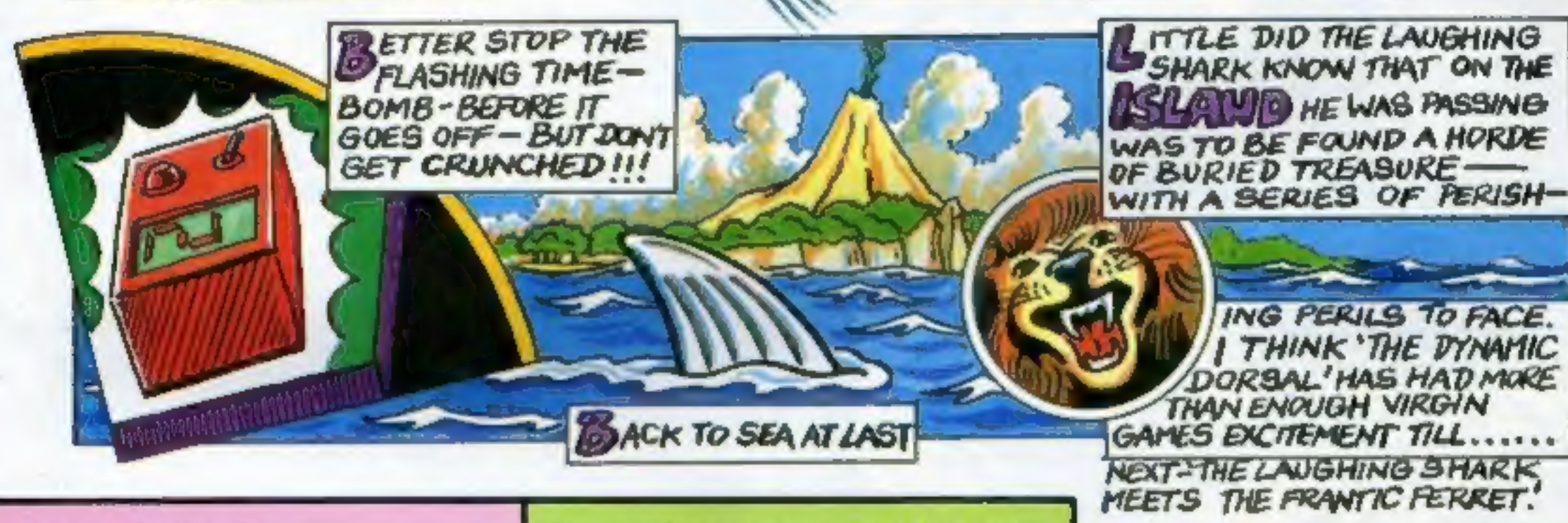
UXB
by Patrick Fisher
Dragon 32
VGB 4004
A nail-biting test of skill and nerves to defuse the unexploded bomb.



Noc-A-Bloc
by Richard Bygrave
BBC B
VGA 3010
Just when you thought it was safe to go back in the deep freeze! Joystick/Key



Ghost Town
by John Pickford
Spectrum 48K
VGC 1018
An intriguing graphical adventure




MAIL ORDER

All our programs are available at normal retail price including postage and packing direct from our "MY LOCAL DEALER STILL DOESN'T STOCK YOUR PROGRAMS DESPITE THE FACT THAT THEY'RE REALLY GOOD DEPARTMENT" at 61-63 Portobello Road, London W11.

COLOUR CATALOGUE

If you want a copy of our sixteen page colour catalogue FREE listing details of all our games, please write to the "GIMMIE A CATALOGUE QUICK JIMMIE"



Cruncher
by Malcolm Ripley
BBC B
VGA 2009
Trample the time-bombs, but avoid the boots or be 'crunched'!
Joystick/Key



The Island
by Martyn Davies
Spectrum 48K
VGC 1015
Find the treasure - a full 48K adventure with action sequences.

DEPARTMENT enclosing an A4 SAE (with 17p stamp).

THE "I WANT TO BE RICH AND FAMOUS DEPARTMENT"

We are always keen to receive any original entertaining programs with good graphics at our now famous "I WANT TO BE RICH AND FAMOUS DEPARTMENT" from any of you programming mega-stars out there. Don't delay - send today!

VIRGIN GAMES GANG

Our GANG is growing in numbers all the time, and everybody who buys one of our NEW GAMES will RECEIVE:

- a year's FREE MEMBERSHIP of the GAMES GANG;
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**Chuckle Egg
48K Spectrum
£6.90**

A & F Software, 830 Hyde Road, Gorton, Manchester M18 7JD

A game for one to four players. There's no joystick capability, but provision for three sets of movement keys, including defining your own.

Pause and Abort functions are built in.

You have five lives for the whole game and, if you run out of time with lives remaining, get another chance to complete the level.

You, the tubby little yellow farmer in the big hat, must climb the ladders, jump gaps, avoid blue geese and collect eggs by stepping on them! Presumably you like omelettes.

Levels become progressively difficult — more eggs and geese,

a more intricate layout, and the appearance of elevators requiring careful timing and luck to negotiate.

I found level three particularly difficult, as the jump key seems to produce random height variations. So I have only reached level four once, without enough lives to even get started, and there may be further levels.

There is a time and running score display, if you dare to look at it, and a Hall of Fame.

I did find the musical interludes annoying after a while but on the whole it's a most enjoyable fun game and very addictive, if a trifle pricey. Try it.

D.C.

instructions	90%
playability	90%
graphics	90%
value for money	80%



**Q*Bert
32K BBC £7.95**

Superior Software, Dept AB9, 69 Leeds Road, Bramhope, Leeds

This new offering from Superior Software is a faithful reproduction of an intriguing new game which is already very popular in arcades.

The object is to move a small figure round a pyramid of cubes, turning each cube's face a different colour as it is landed on.

Your figure is a small red face with a large nose, which may hop diagonally across the cubes.

But watch out for the bouncing balls which appear at the apex of the pyramid and tumble down.

Also dangerous are the snakes,

Screens with new scenes

Our reviewers tried out some new action games with new themes

which appear occasionally and crawl after you.

Each pyramid when completely transformed gives an extra life and a new pyramid.

To help you in your task are two spinning transportation discs which will take you to the top of the structure, dodging the snakes which then plunge to their doom.

It is, however, very easy to fall off the pyramid, and the controls are fairly difficult to master. A high score table and full instruc-

tions are included.

This game is very well written and has excellent graphics and sound. If you liked the arcade game, you'll love this! A good addition to anyone's software collection

D.A.

instructions	85%
playability	80%
graphics	90%
value for money	80%



**Steeple Jack
Atari 400/800
£14.95**

English Software, PO Box 43, Manchester M60 1BW

This game features a little boy called Steeple Jack who, one day seeing real steeple jacks at work, decides to become one himself.

It is at this point that the player becomes involved, by moving Steeple Jack up a network of randomly generated ladders on the world's tallest chimney while avoiding the falling elephants, a rather tame-looking ghost and gaps in the ladder system, which all cause Jack to fall off as he attempts to climb higher.

Jack's animated face adds a touch of humour to this game as it blinks and squirms — why didn't programmer continue this idea with the ghost and the elephant? When Jack dies his face splits

into two separate pieces which fly about the screen while the TV speaker emits a high pitched squealing noise.

In an attempt to find an undocumented pause button I hit the "Option" button, causing the game display to freeze.

The letters on the scoring readout appear to be slightly corrupted — perhaps this is deliberate, although to me it looks like a sign of shoddy programming. The screen display features very smooth vertical scrolling of the main play area.

An original game which, in my opinion, would have benefited from some further development.

D.R.

instructions	90%
playability	50%
graphics	65%
value for money	70%



**Dicky's
Diamonds
Commodore 64
£6.99**

Romik, 272 Argyll Avenue, Slough, Berks

The playing area for this original game is a spider's web, in the middle of which is a diamond.

In order to get the diamond you must move your owl along each strand of the web, turning the strands black as you go.

The last strand which you turn black must be one of the centre axis strands, and to make life even more difficult, the spider must be on this strand as you move on to it.

While you are weakening the web, the spider will walk about the white web only, except when it comes to a dead end, in which case it will re-spin more white web.

If you meet a spider, then it will kill you.

This may sound very easy but believe me, it's not. There are also facilities to make the game even harder. You can have faster speeds, two spiders and limited flights for the owl.

If you manage to collect the diamond, then the web explodes and your owl will fly off with the diamond.

If the last strand of web that you weaken is not on the central axis, then the web explodes and you fall to the ground.

The program can be played with either keyboard or joystick. It is very well-presented, and plays some classical music between games.

K.I.

instructions	85%
playability	100%
graphics	95%
value for money	100%



**Bugaboo
48K Spectrum
£6.95**

Quicksilva, 13 Palmerston Road, Southampton SO1 1LL

Maybe helping a flea to escape from a monster in a pit is not your idea of fun, but that is what you are asked to do in this game.

By using keys one and zero

you hop the flea from shelf to shelf until you reach the surface, then try to avoid a prowling pterodactyl.

Instructions are minimal, just describing which keys should be used.

However, the program runs fairly smoothly with colourful, if not terribly exciting graphics and it is quite difficult to get right to the top.

During loading, you are confronted with messages, and finally see your approach to the blue planet over the title page, which I thought was rather well done.

As for lasting appeal, I am not so sure. The absence of skill levels and high score facility makes it a nuisance for two players to compete.

The whole idea seems to be

aimed at the younger player, and I don't mean that in any patronizing way — it isn't necessarily a bad thing.

N.B.

instructions	40%
playability	60%
graphics	75%
value for money	70%



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Test your taste . . . you could uncork a surprise

Do you know a good wine when you taste one? Whether you consider yourself an expert or have trouble distinguishing between red, white and rose, this program could set the scene for an entertaining evening.

It was written for a PET but will work on any Commodore machine with 8K memory and is very easy to adapt to most other machines.

A word of warning: this program was first tried out by myself and four friends on a range of six German Rhine wines.

We were all convinced that we would easily identify the best/expensive wines. The wines were decanted into identical carafes, coded, then re-coded so even the person who decanted them did



Here's an excuse for a tippie. Brian Jones' program will help you and your friends take part in a blind wine-tasting session. The program will run on any Commodore micro with 8K of RAM. Hic . . . !



How it works

10-40 Initialise values, DIMensions arrays.

50-390 the host sets up the guest list and range of values for the wines (so over enthused, over imbibed guests do not ruin the averages with values of £10 or £1000)

400-790 accepts and validates somebody's scores: 645, 675 and 705 round the score to one decimal place, 730-735 check if the value is to two decimal places or less (i.e. whole number of pence) 770 has to use the abbreviated form of PRINT, i.e. ?, to be fitted in.

800-860 display scores so far - allocated of any of the tasters

1000-1020 subroutine to print error message, clear invalid answer and set print position back at the right place

1100-1180 subroutine to GET a valid number. This can be used in any program where a numeric response is to be accepted and any invalid keys (such as letters) are ignored. 1120 completes the subroutine when return is pressed, 46 is the ASCII code for decimal point - one, and only one, can be accepted, 1130 ignores the second one, 1150 and 1160 test for the delete key. If a decimal point is deleted, reset the flag F which indicates if a decimal point is acceptable. 1160 removes the deleted character from M\$ and from the display but stops you deleting the prompt. The digits 0 to 9 are ASCII codes 48 to 57. 1180 adds the acceptable characters to M\$ and displays them on the screen

2000-2170 Display the overall averages (only for wines/tasters which have been scored). Only the host knows how to stop the program - by pressing S here

- Hints on conversion**
- This program will convert easily to other computers. These are the meanings of the characters peculiar to Commodore BASIC
- Reverse heart (100,230,410, 500,600,736,810,2110) clears screen and cursor home
 - Reverse S (620) cursor home without clearing screen
 - Reverse Q (several) moves cursor one line down
 - Reverse blub (630,660,690,1020) moves cursor one line up
 - Reverse vertical line (450,520, 540,720,760,1020) moves cursor left one per line
 - Shifted space - appears the same as a space (450,520,540,720, 760, always 3 before the reverse vertical lines and in 725 between quotes) traps null entry which would cause program to stop
 - Reverse R (410,610) display in reverse video

not know which was which. After an hour of enjoyable sips and slurps, we all agreed number five was tops. Imagine our surprise, not to say embarrassment, when number five was revealed to be the cheapest Tesco's hock.

```

10 REM WINE TASTING BY B. J.
20 DIM G(10),R(10),S(10),T(10),A(10),B(10),C(10),D(10),E(10),F(10),G(10),H(10),I(10),J(10)
30 REM NAME
40 REM F = "GOOD" OR "BAD"
50 REM D = "DRY" OR "SWEET"
60 REM A = "WINE" OR "SPIRITS"
70 REM B = "WINE" OR "SPIRITS"
80 REM C = "WINE" OR "SPIRITS"
90 REM D = "WINE" OR "SPIRITS"
100 REM E = "WINE" OR "SPIRITS"
110 PRINT "HOW MANY PEOPLE HAVE ENTERED IN THE TASTING?"
120 IF N=0 THEN
130 STOP
140 PRINT "PLEASE MAKE THEM ENTER AT LEAST TWO AND PRINT"
150 STOP
160 PRINT "NAME I AM HERE"
170 FOR I=1 TO N
180 PRINT "NAME I AM HERE"
190 PRINT "ARE YOU SURE?"
200 INPUT "Y/N"

```



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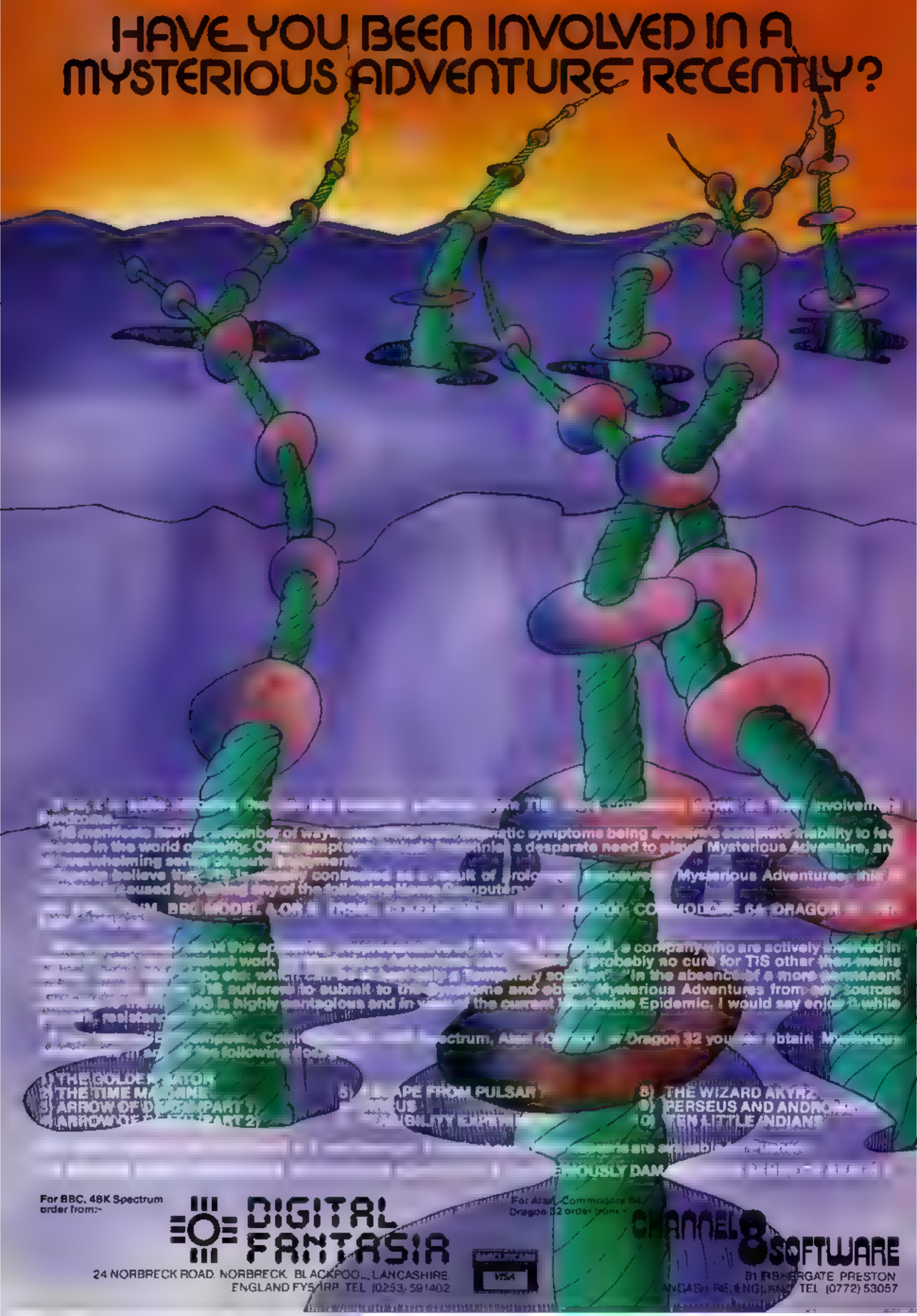
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Laser days with your micro

If alien-zapping's your game, read on. You could find out something to your advantage

Skramble Commodore 64 £7.95

Anirog, 8 High Street, Horley, Surrey

Anirog's version of Skramble is remarkably similar to the version found in the arcades

The game consists of various landscapes and cities scrolling

from the right to the left of the screen. On the ground are various missiles, fuel dumps, rockets, etc — you gain points if you can blow these up

Depending on which landscape you are flying over, rockets may take off or UFOs and fireballs may attack you

The graphics are slightly on the slow side and rather jerky, though after playing a few times you do get used to this

Grid Runner Spectrum £6.95

Quicksilva, Palmerston Park House, 13 Palmerston Road Southampton, Hants. SO1 1LJ

I had immediate problems with Grid Runner. The cassette may have promised instructions as soon as loading was complete, but none were forthcoming

I then fiddled about with the keyboard and eventually discovered a superb game

It's a convoluted plot but basically you operate a laser base (grid runner) at the bottom of an electrical grid

Packets of electricity in chains descend the grid. If you hit a chain it splits into smaller packets, making it harder to destroy each fragment

If the electricity reaches you

you are zapped. The zapping effect is excellent, accompanied by a nice electrical sizzling sound and little ripples of charge along the grid

The graphics are of a high standard and the author has even created a new chunky character font to replace the standard Spectrum alphabet. I found this reduced colour crawl on my screen

A high score feature is provided and, since the grid runner can move up and down as well as side to side, a high degree of hand-eye co-ordination is required

But please, Quicksilva, can we have some on-screen instructions as promised? **M.B.**

instructions	10%
playability	90%
graphics	90%
value for money	90%



Ultima Zone 48K Oric-1 £8.50

Tansoft, Units 1 & 2, Cambridge Techno Park, Newmarket Road, Cambridge

Tansoft has added an exciting new fast-action, all-machine-code arcade game to its repertoire. Ultima Zone is a three-stage space battle. If you can survive to the end, you return to the first stage but with faster-moving opponents and more of them

The program loaded perfectly, and I only had to read the instructions twice before I realised what I was doing wrong

Stage 1 is the most impressive part and skilful programming of the bouncing "brunes" is evident

You are equipped with a laser to blast them with, and a recharge

able defence shield to assist you in tight spots

Having zapped the colourful wankons and destroyed the highly dangerous brunes, the action slows down while you manipulate a remote control laser in a cruelly short timescale

Whether or not you collect a bonus, progression to stage 3 is assured. Here your keyboard skill is severely tested in avoiding various orbital defences — a bit like froggy crossing the road

The Oric's super sound has not been stretched to its full capability, but this may be viewed as a blessing by any non-micro freaks in the neighbourhood **P.S.W.**

instructions	90%
playability	95%
graphics	85%
value for money	85%



The colours and definition used in the graphics are top quality and cannot be criticised

The sound is quite good, too, although I would have liked a firing noise to be made when I press the fire button — the only fault here

The program can only be used with a joystick — perhaps this is better than bashing your key-

board to pieces! The fire button releases both missiles and bombs when pressed. **K.I.**

instructions	40%
playability	87%
graphics	90%
value for money	90%



Quintic Warrior Commodore 64 £7.95

Quicksilva, Palmerston Park House, 13 Palmerston Road Southampton, Hants. SO1 1LJ

No, this game isn't an adventure as the name may suggest, it is in fact an arcade style game

You are a small space craft (or possibly a warrior?) The object of the game is to shoot at rows of your enemies as they move slowly up the screen

Along the screen edges are three laser cannons, which continuously fire missiles horizontally and vertically

If you are caught at the point where the missiles cross over, then you lose a life

The graphics and screen layout are rather limited — the author obviously didn't use much imagination to create the shapes. The sounds are acceptable but again they are nothing stunning

The documentation is virtually non-existent. On running the program I was shown a few pages of instructions which I had forgotten by the time the game was loaded

The game didn't appeal to me — I soon got bored with it — but perhaps a young child might find it quite a challenge. It isn't really fast enough for anyone over 10. **K.I.**

instructions	10%
playability	40%
graphics	75%
value for money	70%



The Ultra Oric-1 £6.95

PSS, 452 Stoney Stanton Road, Coventry

If I am right, the Ultra will prove to be one of the great Oric software successes of 1983

Devastatingly simple in concept, it nevertheless has that indefinable ability to compel you to have just one more attempt to

try and fight your way through its 16 separate screens

The task, starting with just five lives, is to meet the challenge of The Ultra, an evil race of mutant aliens who have challenged you to a battle to the death in outer space

After an impressive hyperspace warp to the battlezone, you do battle with a host of Pacman-style characters, while continually being bombed

Screen two has Space Invader

type aliens, screen three rolling coloured cubes and screen four yellow blobs that constantly change in size

So far I have still to get past screen six — but the challenge of finding what the remaining screens are hiding keeps me going night after night. Use of graphics is among the best so far for the Oric

The Ultra provides extra lives at 2,000 and 10,000 points — and you will need them — along with

sound level selection, an Ultra Hi Score feature with an attractive sideways scrolling title and clear instructions

A must for Oric owners **S.I.**

instructions	85%
playability	95%
graphics	100%
value for money	95%



Let your computer look after your finances

Check the state of your finances at any time with my Budget program which enables you to set up and maintain your own personal database

The cassette file will hold 52 weeks of transactions with 14 transactions to each week as well as an opening and closing balance

Each transaction consists of a four-character identifier — such as CASH or MORT — and a plus or minus amount for pounds and pence

The positive amounts are income and the negative amounts are outgoings

You have full facilities for inputting and altering transactions and a wide range of display screens for examining balances and movements.

The whole thing is menu driven and simple to operate. Here are a few points to bear in mind:

- On your first run through the program, when asked to PRESS I FOR INITIAL FILE LOAD you should respond with I. This will enable you to input a primary opening balance and the date from which you want your 52 weeks to start

Main variables

TRS and VL are 52 by 16 item arrays referring to transactions within weeks. The first contains the four-character transaction type and the second contains the corresponding values. These two, along with the 52-element "week-ending date" array, comprise the data file which is read in by the cassette interface at the beginning of each run

Having loaded your initial transactions you may end with a file update which will write your data file to cassette.

On subsequent runs you should respond with any key other than I. This will then load in your cassette data file and allow you to amend, input or simply display information

- Keep your data file on a separate cassette from the program; simply swap cassettes when the program is loaded.

- Remember to run the RECALCULATION function when you have input or altered transactions.

Why do you run out of money so quickly? Brian Hughes' Budget program for the Dragon will tell you and give you a day-by-day guide to your home accounts



- To move on from a display, simply press any key and the program will continue

- Type "end" as a transaction type to complete a session of inputting transactions.

- When using the program's paging facility — for example, moving through the file display a week at a time — you may press E to end before you reach the final week.

Hints on conversion

The cassette data file handling is a particular feature of the Dragon and makes it unlikely that this program would convert easily to other computers. Otherwise the program should be fairly easy to use on other micros.

- The two POKEs, &HFDD7.0 and &HFDD6.0,

switch the Dragon's 6809 processor in and out of high speed mode. Because of these always re-set the computer if the program ends abnormally

How it works

10 POKE to increase processor speed and CLEAR to reserve enough string space
 20-40 dimension arrays and set up headings
 50-70 set up opening and closing balance transaction types
 110-120 set initial opening on first day
 130-200 calculate week ending dates at seven-day intervals from first week-ending date as input
 210-350 clear high speed POKE (cassette interface works only at normal processor speed), open data file, read in arrays VL, TRS and DT, close data file and re-establish high speed processing
 360-510 display main menu
 520 start of new transaction routine
 520-580 search for next available space in the arrays space in the arrays
 590-670 process a new transaction, letting you know if all 14 transactions for this week have been used
 680-740 change existing transactions, keyed by week and transaction numbers
 810-900 set up sub-menu relating to display options
 910-960 calculate week number when only the date is known
 970-1030 page through array displaying one week at a time
 1040-1060 display each line of transactions, using as general purpose routine for the display functions
 1070-1100 display one week's transactions
 1110-1170 recalculate opening and closing balances incorporating all new or amended
 1180-1230 open data file — don't forget to make sure your data tape is re-wound — outputs three main arrays, then close the file
 1240 ensures computer is restored to normal processing before ending program
 1250-1330 search for any balances which are less than or equal to zero and print week number so you may investigate further. I've found this useful on the odd occasion!
 2000-2600 put 16 weeks' closing balances on the screen from any given week number

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10 POKE 51200,0:POKE 51201,0
20 DIM VL(52,16):DIM TRS(52,16):DIM DT(52,16)
30 DIM WED(52):DIM WED2(52):DIM WED3(52)
40 DIM WED4(52):DIM WED5(52):DIM WED6(52)
50 DIM WED7(52):DIM WED8(52):DIM WED9(52)
60 DIM WED10(52):DIM WED11(52):DIM WED12(52)
70 DIM WED13(52):DIM WED14(52):DIM WED15(52)
80 DIM WED16(52):DIM WED17(52):DIM WED18(52)
90 DIM WED19(52):DIM WED20(52):DIM WED21(52)
100 DIM WED22(52):DIM WED23(52):DIM WED24(52)
110 DIM WED25(52):DIM WED26(52):DIM WED27(52)
120 DIM WED28(52):DIM WED29(52):DIM WED30(52)
130 DIM WED31(52):DIM WED32(52):DIM WED33(52)
140 DIM WED34(52):DIM WED35(52):DIM WED36(52)
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160 DIM WED40(52):DIM WED41(52):DIM WED42(52)
170 DIM WED43(52):DIM WED44(52):DIM WED45(52)
180 DIM WED46(52):DIM WED47(52):DIM WED48(52)
190 DIM WED49(52):DIM WED50(52):DIM WED51(52)
200 DIM WED52(52):DIM WED53(52):DIM WED54(52)
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2640 DIM WED784(52):DIM WED785(52):DIM WED786(52)
2650 DIM WED787(52):DIM WED788(52):DIM WED789(52)
2660 DIM WED790(52):DIM WED791(52):DIM WED792(52)
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2690 DIM WED799(52):DIM WED800(52):DIM WED801(52)
2700 DIM WED802(52):DIM WED803(52):DIM WED804(52)
2710 DIM WED805(52):DIM WED806(52):DIM WED807(52)
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2760 DIM WED820(52):DIM WED821(52):DIM WED822(52)
2770 DIM WED823(52):DIM WED824(52):DIM WED825(52)
2780 DIM WED826(52):DIM WED827(52):DIM WED828(52)
2790 DIM WED829(52):DIM WED830(52):DIM WED831(52)
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2810 DIM WED835(52):DIM WED836(52):DIM WED837(52)
2820 DIM WED838(52):DIM WED839(52):DIM WED840(52)
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2950 DIM WED877(52):DIM WED878(52):DIM WED879(52)
2960 DIM WED880(52):DIM WED881(52):DIM WED882(52)
2970 DIM WED883(52):DIM WED884(52):DIM WED885(52)
2980 DIM WED886(52):DIM WED887(52):DIM WED888(52)
2990 DIM WED889(52):DIM WED890(52):DIM WED891(52)
3
```


DRAGON PROGRAMS

```

320 PRINT#7 "home accounts menu
330 PRINT#36 "0. SEARCH FOR PROBLEM BAL.
340 PRINT#36 "1. ADD NEW TRANSACTION
400 PRINT#36 "2. CHANGE FIRST NO. TRANS
410 PRINT#36 "3. DISPLAY WEEK'S FIGURES"
420 PRINT#36 "4. RECALCULATE BALANCES"
430 PRINT#36 "5. FILE UPDATE"
440 PRINT#36 "6. END OF RUN"
450 PRINT#36 "7. DISPLAY BALANCES"
460 AS=KEY$:IF AS= THEN 440
470 IF AS="0" THEN 320
480 IF AS="1" THEN 340
490 IF AS="2" THEN 400
500 IF AS="3" THEN 410
510 IF AS="4" THEN 420
520 IF AS="5" THEN 430
530 IF AS="6" THEN 440
540 IF AS="7" THEN 450
550 GOTO 440
560 CLR:INPUT ENTER DATE (DDMMYY): "1:000000 750
570 FOR WN=1 TO 5
580 (1 FD DT MN) THEN NEXT MN
590 FOR TN=1 TO 5
600 IF VL (MN, TN)=0 THEN 590
610 NEXT TN
620 GOTO 450
630 INPUT ENTER TRANS TYPE: (TYPE TO END) THEN 340
640 IF LEN IS 4 THEN PRINT "too long" GOTO 590
650 TR=LN TN -10
660 INPUT ENTER TRANS VALUE: V
670 VL MN TN=V
680 GOTO 570
690 CLR:PRINT#224 "no space try another week
700 IF (KEY$="") THEN 440
710 GOTO 520
720 CLR:INPUT ENTER WEEK NO: MN
730 INPUT ENTER TRANS NO: TN
740 PRINT#224 MN TN, "BECOMES"
750 INPUT (TYPE TO) "MN TN -10
760 CLR:PRINT#224 MN TN, "BECOMES"
770 INPUT#224 MN, TN, V
780 GOTO 570
790 PRINT#224 "100:1000"
800 PRINT#224 "00:00"
810 IF D=1 THEN RETURN
820 GOTO 740
830 CLR:PRINT#224 "2. TRANSFORM DATE TO WEEK NO.
840 PRINT#224 "3. PAGE THROUGH FROM WEEK NO.
850 PRINT#224 "4. DISPLAY WEEK NO.
860 PRINT#224 "5. RETURN TO MAIN MENU
870 AS=KEY$:IF AS= THEN 830
880 IF AS="1" THEN 810
890 IF AS="2" THEN 820
900 IF AS="3" THEN 830
910 IF AS="4" THEN 840

```

```

920 GOTO 830
930 INPUT ENTER DATE (DDMMYY): "1:000000 750
940 GOTO 750
950 FOR WN=1 TO 5:IF (FD DT MN) THEN NEXT MN
960 FOR TN=1 TO 5:IF (MN, TN)=0 THEN 950
970 NEXT TN
980 GOTO 750
990 CLR:INPUT ENTER WEEK NO: MN
1000 INPUT ENTER TRANS NO: TN
1010 PRINT#224 MN TN, "BECOMES"
1020 INPUT (TYPE TO) "MN TN -10
1030 CLR:PRINT#224 MN TN, "BECOMES"
1040 INPUT#224 MN, TN, V
1050 GOTO 750
1060 PRINT#224 "100:1000"
1070 PRINT#224 "00:00"
1080 IF D=1 THEN RETURN
1090 GOTO 1040
1100 CLR:PRINT#224 "3. PAGE THROUGH FROM WEEK NO.
1110 PRINT#224 "4. DISPLAY WEEK NO.
1120 AS=KEY$:IF AS= THEN 1100
1130 IF AS="1" THEN 1060
1140 IF AS="2" THEN 1070
1150 IF AS="3" THEN 1100
1160 IF AS="4" THEN 1110
1170 GOTO 1100
1180 CLR:PRINT#224 "4. RECALCULATE BALANCES"
1190 PRINT#224 "5. RETURN TO MAIN MENU
1200 AS=KEY$:IF AS= THEN 1180
1210 IF AS="1" THEN 1100
1220 IF AS="2" THEN 1110
1230 IF AS="3" THEN 1180
1240 IF AS="4" THEN 1190
1250 GOTO 1180
1260 GOTO 750

```

AGF

MICRODRIVE COMPATIBILITY

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PROGRAMMABLE JOYSTICK INTERFACE for Spectrum or ZX81

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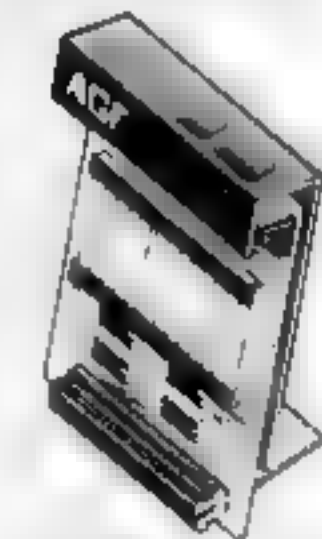
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PROGRAMMABLE INTERFACE

AGF's Programmable Joystick Interface is a unique device which allows you to program your joystick to perform any of the 256 different actions available on the Spectrum or ZX81. This means you can use your joystick to control anything from a simple game to a complex simulation.

Key features include:

- 256 programmable actions
- Simple to use
- Compatible with all Spectrum and ZX81 computers
- Includes a comprehensive manual



PACKAGE CONTENTS SUPPLIED

- 1 Programmable Joystick Interface
- 1 Comprehensive Manual
- 1 Cable to connect to your computer
- 1 Cable to connect to your joystick

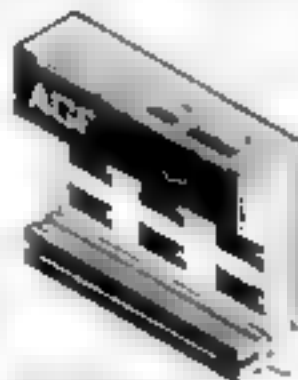
JOYSTICKS

CONTROLLERS

AGF's Joystick Controllers are designed to provide you with a wide range of joystick actions. They are compatible with all Spectrum and ZX81 computers.

Key features include:

- Wide range of actions
- Simple to use
- Compatible with all Spectrum and ZX81 computers



JOYSTICK INTERFACE II COMPATIBLE SOFTWARE

Software Title	Price
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Assault	£1.95
Assault 2	£1.95
Assault 3	£1.95
Assault 4	£1.95
Assault 5	£1.95
Assault 6	£1.95
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	JOYSTICKS	1.95	
	PACKS OF CONTROLLERS	00	
	VIDEO TAPE	FREE	
ZNB	ZX81 TRUM		
	TOTAL TOTAL		

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	JOYSTICK INTERFACE II	15.95	
	CONTROLLERS	1.95	
	SOFTWARE	00	
ZNB	ZX81 TRUM		
	TOTAL TOTAL		

CHOOSING A HOME MICRO



Choosing a home micro can be a daunting task to the newcomer, and with an ever increasing number of micros emerging on the market, even up-grading, say, from a ZX81 can be a risky and expensive exercise if the wrong decision is made. It is important to look at the real facts and specifications, and check exactly what you get for your money before choosing your micro-computer system.

THE PITFALLS

"DON'T LET THE ADD ONS ADD UP"

A number of large companies are offering packages that seem to be good value and low cost. These offers usually have a hidden sting inasmuch as the essential accessories such as connection leads, peripherals and software often carry very high cost premiums e.g. software for low cost hardware usually costs between £29 and £49 for a ROM cartridge!

CHECK THE QUALITY OF THE PRODUCT.

Raw materials are now an area where corners can be cut, and shoddy workmanship during 'building' can effect the up-time of your unit. Areas to watch out for are unreliable edge connectors, corrosion and poor quality P.C.B.s. Low quality components and bad design will seriously effect the reliability of the end product, and can lead to false economy.

DON'T BUY A GAMES MACHINE

Unless you want 'just games and nothing else' with a games computer you are limited. Some computers, however, have the advantage of both games facility plus the whole world of computing to explore, as your interest and skills develop. A real computer system will allow you to expand your knowledge of the Hi-Tech world, and help earn its keep with its added uses in the field of education, communication and home business use.

SOFTWARE

Make sure the system you choose has a growing library of support software to enable you to realize the full potential of your machine.

KEY POINTS TO LOOK FOR

● High Resolution Colour

In general most home computers have a poor graphics resolution (or detail). Check on the vertical and horizontal resolution in graphic mode and multiply the two numbers together. If the result is less than 35,000, then the graphics can hardly be considered high resolution. Without high resolution graphics displays such as those used in games tend to be "Chunky" in appearance.

● High Quality Sound

Some computers claim to provide a sound channel when in reality all that can be found inside the computer is a small buzzer controlled by electronic pulses. At the very least a sound facility should provide more than one channel and a raise channel as well (for gun shot effects in games for example). The best systems also provide envelope control of the sound channels to produce very sophisticated effects, very important for generating music. Also look for the ability to connect to external amplifiers.

● Keyboard

For accurate entry of programs and data into a computer it is important that the keyboard has a good tactile feel in operation. Coupled with acoustic feedback the user is fully aware when the computer has accepted his/her actions. Also of importance in a keyboard is layout. A standard computer keyboard layout will familiarise the user with the vast majority of computers used in the world of business and professional applications, very important if the purpose of purchasing a computer is educational.

● RAM

One of the most important features of a computer is the amount of RAM or memory included. In general the more powerful and exciting a computer program is the more RAM it requires. But take care - all computers are advertised quoting the total RAM used in the system. Computers use up a great deal of their own RAM for storing essential data and particularly in supporting the graphics display and the CPU. If it is less than 32K think again, is it enough?

● Computer Language

It is no difficult to program a computer in its own binary language so high level languages are used, the most popular being BASIC. However there are a number of BASICs, some being very different from the rest. A de facto standard in the computer industry is Microsoft BASIC. Learn this one and you will be able to program in the majority of computer BASICs, such an important point if a home computer is to be used to educate your children to face the technology of the future.

● Expansion

As your interest and knowledge of computing grows, you will need a



When buying a computer system, think about the software you will need to run it, its price and software that can be added to it. It is a good idea to choose a computer system that can be expanded to meet your needs.

computer system that will grow with you, able to accommodate Printers, Disk drives, systems, Communications Modem, and Colour Monitor, as well as produce H.F. sound effects.

● Software

The computer you choose should have a growing selection of utility

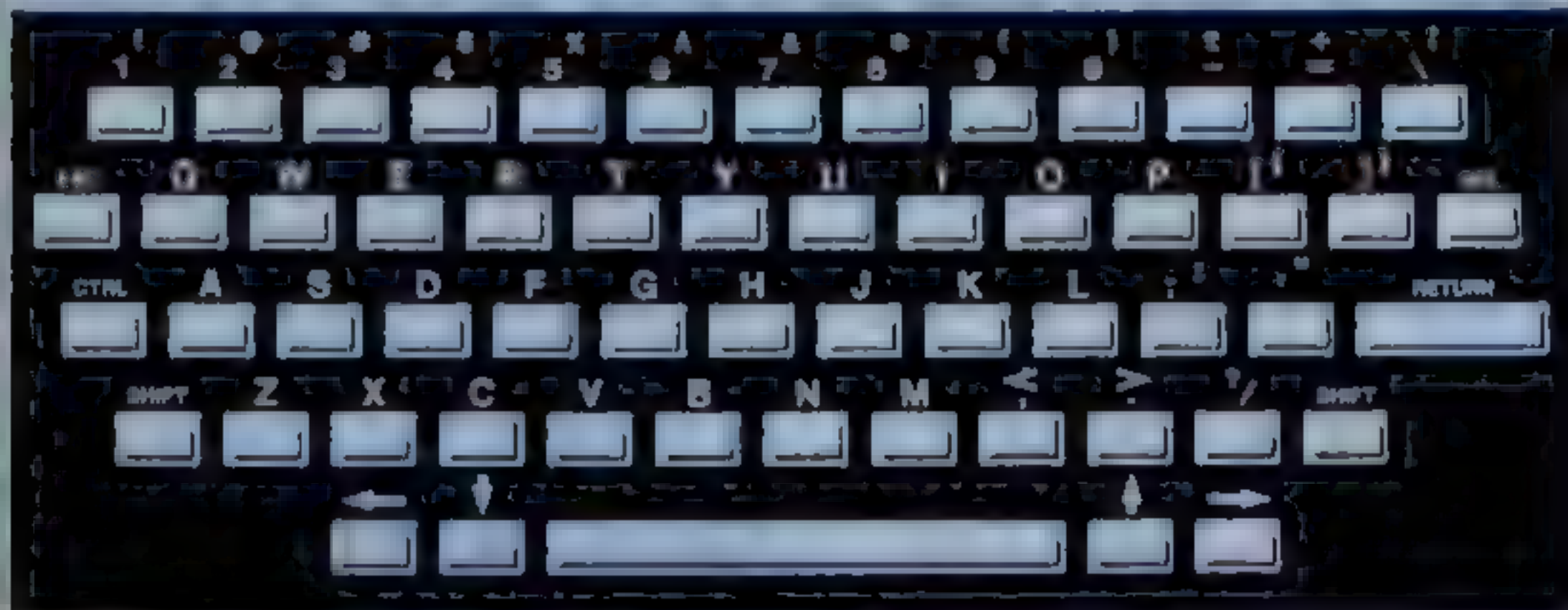
software to make the most of its capability. Remember, computing is here to stay. You can't learn to compute on a toy, or a device which does not behave like a real computer. In short, look out for a computer which offers all the points above, and you will be sure of getting the best value for money.

To find out which company offers you the right choice, with:-

- Good value, high specification, quality micros.
- A quality, 4 colour, plain paper printer/plotter.
- Communications Modem.
- Micro Disk Drives.
- Comprehensive and growing range of software

TURNOVER... →

ORIC-1



The Growing System



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The Oric Modem is the latest CMOS single chip modem running off the Oric's own power supply. Its own ROM will store 256 characters for terminal use with all the communications benefits including Viewdata, Telesoftware, and Electronic Mail.



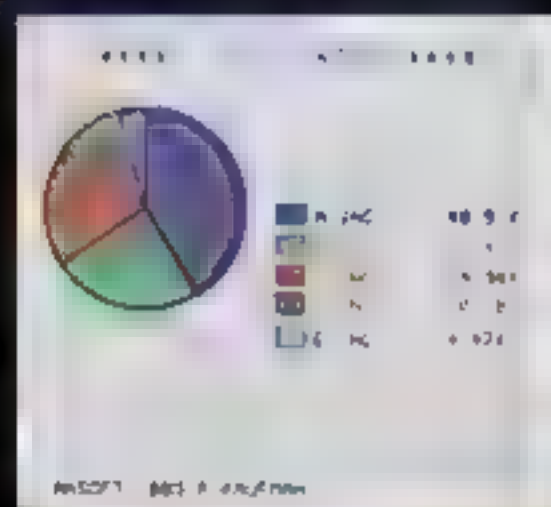
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Coming soon are the incredible new 3" Oric Micro Drives. Small size, Compact, High precision disks with storage capability of 100,000 Bytes to in excess of 1 Megabyte unformatted. With their own built-in power supply, these easy to use units will add big system capability to your home micro.

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The right choice for real computing

ORIC-1

Before making your final choice, check any other home micro in the same price bracket against the incredible specification of the ORIC-1

● Quality of build and materials	● Real computer keyboard layout and moving keys
● Superb styling / Full colour display	● High Resolution colour graphics 240 x 200 pixels
● Choice of 16K or 48K RAM	● Real computer language programming - Basic / Forth
● Latest design technology and circuitry	● Teletext/Viewdata compatible graphics (28 rows x 40 characters)
● Real sound - 8 octaves plus Hi-Fi output	● Cassette Port & R.G.B. output.
● Centronics printer interface	● Fully supported and growing software library
● Colour printer / Disk Drives	● A fully expandable system for home, education & small business use
● Communications Modem	● Full range of peripherals to support your system...

ORIC-1 Setting today's standard in Quality and Price.

ORIC-1 48K £139.95 inc. VAT ORIC-1 16K £99.95 inc. VAT

All ORIC computers purchased before 31st December 1983 come with a £40 voucher off the M.R.P. of the MCP 40 Colour Printer. MCP 40 COLOUR PRINTER £169.95. OFFER PRICE £129.95

TANSOFT ORIC Software

The fast growing success of ORIC-1 means that an incredible number of software titles are becoming available for your Oric. With many well known titles from independent software houses, plus exclusive ORIC SOFTWARE from TANSOFT, you can now drive your Oric towards its full potential.

Below is a small selection from Tansoft's range, all of which offer superb value.

BUSINESS

ORIC BASE, ORIC CALC, AUTHOR.

MACHINE LANGUAGES

FORTH, ORIC MON.

COMPUTER GAMES

ZODIAC, HOUSE OF DEATH, ORIC MUNCH, SUPER BREAKOUT, ULTIMA ZONE, DEFENCE FORCE.

TOURING LANGUAGES

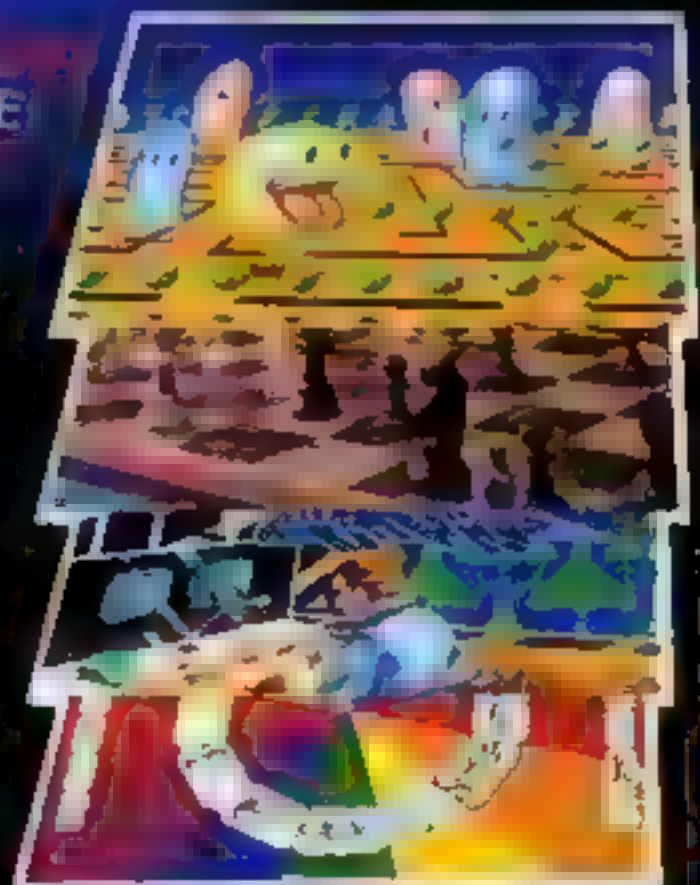
GERMAN, SPANISH, ITALIAN, FRENCH.

GENERAL INTEREST

ORIC CHESS, MULTIGAMES 1, MULTIGAMES 2, ORIC CAD, THE NOWOTNIK PUZZLE.

TANSOFT ORIC SOFTWARE available from your ORIC supplier and all good software dealers. For full list of further information contacts:

NEWS & LATEST RELEASE
THE NOWOTNIK



A touch of class?

Two teachers test these teaching programs for the home and classroom too

Geography 48K Spectrum £6.50

Kemsoft, The Woodlands, Kempsey, Worcs

Although it takes a full six minutes to load, this program cleverly provides you with several pages of instructions on the screen while you wait.

At the end of loading you are rewarded for your patience with a superb high resolution colour map of the world.

This educational program tests your knowledge of geography, specifically countries of the world, their capitals, the countries of the U.K. and seas of the world.

Given a country, sea or county, you move the cursor over a map to show you know where it is.

If you are wrong, the program

gives you the correct answer.

There is provided a learning mode to give you the 10 answers to the test prior to the test.

In each of the five categories of test there are several blocks of 10 questions, so it will take some time to learn all the answers.

Superb on-screen maps of the world, Europe and Great Britain enhance a well produced cassette

It demonstrates how home computers should really be used, and puts all arcade games to shame.

instructions	70%
ease of use	90%
graphics	100%
value for money	90%



Junior Education Spectrum £7.50

Calpac, 108 Hermitage Woods Crescent, St Johns, Woking, Surrey GU21 1LF

Eight good educationally-sound programs from an unpretentious company whose aim is to provide programs to reinforce the child's school work. Essentially these programs do so admirably.

It would be impossible to describe all eight, so I will just mention their titles — all are aptly named! They are Draw, Homophones, Subtract, Flower, Tables, Comprehension, Romans and Spelling. Flower needs a special mention as this is very nearly a teaching program in its own right.

Most programs follow the same format of building up a picture on

correct answers and animating it at the end if enough correct answers were made.

Presentation is very good, the graphics are excellent, colour and sound are well used, and all programs loaded first time.

Two of the programs can be tailored to suit the teacher/parents' own requirements. Comprehension and Spell both let you create your own sentence/word databases.

The tape is supplied with a six-page booklet which contains clear notes on each program.

A valuable and useful pack for both school and home.

	R.E.
instructions	98%
playability	87%
graphics	91%
value for money	100%



Maths-Trek Dragon £5.95

Dungeon Software, PO Box 4, Ashbourne, Derbyshire DE6 1AQ

The current educational term for judging computer software is "degree of interaction", meaning basically that the program has to involve the child in a reflective exercise.

This one comes from one of the centres of Dragon software retailing. Nice to see they're willing to put their own heads on the block!

Maths-Trek is well packaged and presents its contents well initially with a short inlay and then in more detail on screen.

The player is taken through a simplified version of Star Trek in high res screens, with the object of getting to a star base for refuelling. Along the way, difficulties are encountered: asteroids, Klingons, black holes

and fuel shortages. These are dealt with by solving the maths problems posed by the computer. Normal progress is made by answering questions pre-set according to difficulty and type.

The nine year olds I tried this on loved it. They enjoyed the novelty of a "game" at their own level, with interesting graphics to motivate them.

At each starbase the player has the opportunity of increasing the level of difficulty. One difficulty at the start seemed to be the fuel running out too soon. Good at home or in the classroom, but unfortunately a solitary trek.

instructions	95%
playability	90%
graphics	90%
value for money	95%



Midas Maze Dragon £5.95

Dungeon Software, PO Box 4, Ashbourne, Derbyshire DE6 1AQ

Described as "An Exploration for Younger Players", there is no other guideline as to just what age group this might be suitable for.

The game consists of a low-resolution maze in which you wander around to locate the

treasure.

Only the arrow keys are used to move, but if you get into a right corner you can place yourself randomly elsewhere.

On the face of it, that doesn't sound too promising, but there is a lot more built in.

Young children of about five practising their motor skills need a lot of visual stimulus.

This is provided by the author, Mike Meineck, through a charming mixture of high- and low-res

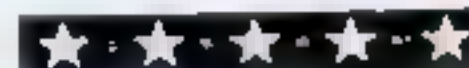
excursions, giving the youngster pictures and actions which help with co-ordination and memory. I particularly liked the helpful Fairy Nuff.

I've tried it out with five to nine year olds, and they enjoyed the game. It was easy to cope with and contained enough to keep them interested. Loading proved simple and the instructions were straightforward.

Fun for the youngsters with a minimal amount of supervision

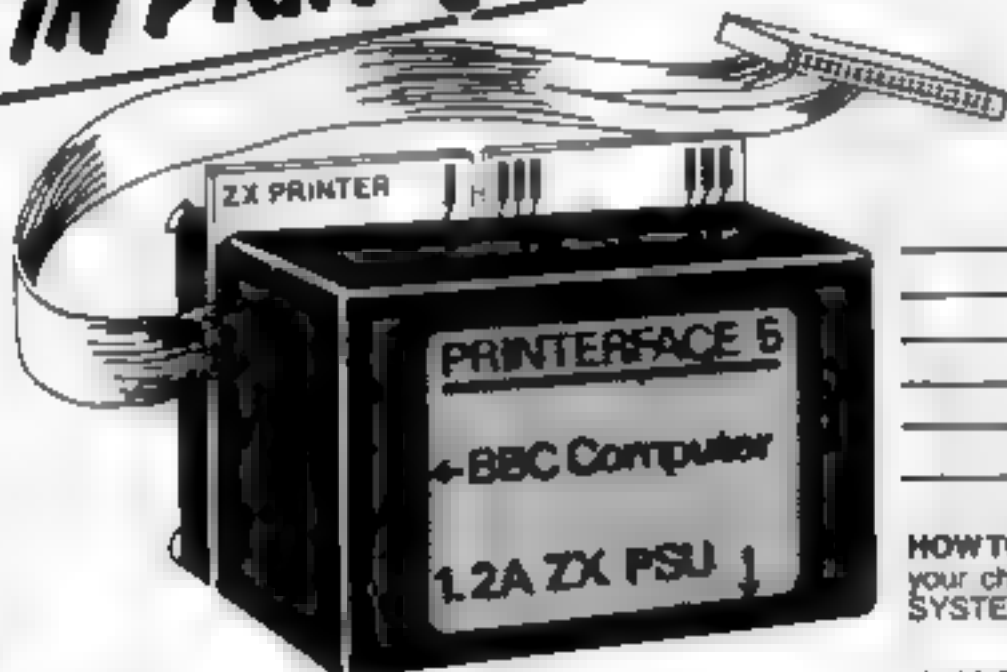
— I would even be happy to see this one in a play school.

instructions	95%
playability	95%
graphics	80%
value for money	100%



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If more programs shared the quality of OMNICALC, then we might see more Spectrums in offices. Home Computing Weekly 3/5/83

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Sinclair User June 1983
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How can I crash-proof my Spectrum?

I have been very impressed in recent weeks by the increasing number of high quality contributions published in your magazine. I consider that producing simple "home" programs can be very rewarding for computer owners.

I was thrilled to read Ray Elder's article in HCW 31 on Crashproofing your ZX81. I also own a Spectrum, and would greatly value a repeat of this article applied to that machine.
Alfred Borg, Aughton, Lancs

Ray Elder replied: "It's nice to know you enjoyed the article. The same principles I used to crashproof the ZX81 can be used on the Spectrum with a few modifications, and I'll be writing a short piece on these modifications soon."

Make up your minds

I was leafing through my back copies of HCW the other day, on the lookout for any VIC-20 programs that had missed my roving eye, when I noticed something that struck me as funny.

In issue 28 there was a Spectrum program. So what, I hear you say. Well, it was the one where you had to protect a city from a destructive Buck Rogers. In the following issue you had another Spectrum program. This time, you had to bomb a city. Talk about split personalities.
Andrew Hitchen, Walton, West Yorks.

Now any micro's welcome

With the large increase in variety of home computers over the last year, the Aylesbury ZX Computer Club have decided to drop the 'ZX' from its name, to cater for all makes of microcomputer.

As the main microcomputer club in the area, the Aylesbury group have found that despite the fact it was primarily a Sinclair user group, users of micros

Send your letter to Letters, Home Computing Weekly, 145 Charing Cross Road, London WC2H 0EE. Don't forget to name your computer — the best letter could win £5-worth of software. Got a problem with your micro? We'll soon be starting a queries page, so send your technical questions to Queries at the above address



other than the ZX series have been drawn to the club.

With the initials 'ZX' now dropped from its name, the club has formalised its interest in all makes of home computer.

The club will continue to hold weekly meetings at Quarrendon School (each Friday at 7.30pm) and monthly meetings at the Mandeville Centre.

Further information on the facilities offered by the club and its activities can be obtained from myself, on Aylesbury 630867.

Please could you bring these changes to the attention of your readers?
David Nowotnik, Aylesbury, Bucks.

Fair deal for Pontoon?

When I read your report on Grid Run and Pontoon in HCW 32, I could not believe that you were writing about my games.

For Grid Run you stated that "little skill is involved" — but nothing could be further from the truth.

It is a skilful game in which you have to plan ahead carefully choosing the correct path to avoid being destroyed. The game gets increasingly faster at the higher levels, a fact that I doubt you appreciate.

In Pontoon you state that it "lacks challenge". This game strictly adheres to the same laws of chance as the card game. Am I to presume that the card game Pontoon also "lacks challenge"?

I have been told by many of our customers that the graphics are among the best they have seen for the Spectrum, and how much they enjoyed the game, which naturally appeals to a different market from Space Invader type games.

May I suggest that when reviewing games in the future you test them thoroughly as comments based on a superficial ap-

praisal are most unfair to writers who have spent months working on these games before writing a review which will be considered by many of your readers as gospel!

Bruce Rutherford, Arcade Software, Orpington, Kent
Our reviewer replied, "I think it's a little unrealistic to expect a reviewer to play a game for months before saying anything about it, but I did spend rather more than five minutes on Grid Run and Pontoon, and I feel my comments were fair. In Grid Run, I felt that it was too easy to get into a situation where it was impossible to avoid the car that's chasing you, and where you couldn't get out however skilful you were."

As for Pontoon, I did say in my review that the graphics were good, but I don't think that card games transfer well to computers — most of the fun is in playing with real cards against real opponents as far as I'm concerned. A case of nice implementation — shame about the game."

Cry from the heart

These verses are a cry from the heart from the mum of a computer-made family. Any sympathisers?

The years have caught me, left me behind,
The new technology boggles my mind
No more for me the turn of a knob,
But microwaves, chips to finish the job

Computers and robots are found every place,
Programs and bits, bytes and dump,
Digitiser, atom, synchronous, interface,
And me! — cumulative error or frump?

Nan Bickford, Stafford

Family Fortunes

In recent weeks, I have noticed that people have written in claiming their high scores on various computer games, so I thought I would tell you mine.

Our family has a TI-99/4A. My high score on Parsec is 914,000, which took me 1¼ hours. My dinner went cold while I achieved it.

Also, my sister has munched her way up to 220,570 on Munchman. Can any TI owner beat these scores?

Antony Palourti, Harrogate, North Yorks.

Girls and micros

I am researching the differences, if any, between males and females in computer skills and interests, particularly with regard to computer games, and I would welcome assistance from your readers

The information can be given anonymously if desired but I need to know the sex of the correspondents, approximately how many hours each week are spent using the computer, what percentage of the time is spent playing games and the names of their three favourite games with the relevant highest scores if appropriate

I would also be interested to know of any other work your readers know of in similar areas, and would be very pleased to hear their views on why so few girls and women seem to be interested in micros

Anne Shadbolt, Sheffield City Polytechnic, Totley Hall Lane, Sheffield S17 4AB

Chatter talk

We were very pleased to see quite favourable reviews of our programs, Chattermaths and Chattercount (HCW 34)

We must assume that, for some reason, the reviewer had not been given a copy of the instructions

These are not within the program because of insufficient memory and the age of the children playing. They should be on the cassette insert

Could we therefore make the following points?

Chattermaths includes subtraction as well as addition, and has two levels of difficulty: answers up to 10 and answers up to 10 + 10

There is a simple form of scoring which can be reset to zero for use by another child

In Chattercount, the 'mediocre' number recognition routine is intentionally simple, and acts only as an introduction to the numbers on the keyboard

A child who gets five correct answers automatically moves onto a slightly harder version of the same game. Spoken help is given when necessary in each game

There is a choice between numbers up to five and numbers up to nine

These programs are also among those available for use on the Spectrum with the Currah Microspeech
B. M. & S. M. Hodgson, Gilling East, Yorks.

Can we put in a plea here to software companies to ensure that the review tapes you send us are the versions that will be on sale, complete with final packaging and instructions? Our reviewers can't comment on what they haven't been sent, so it's in your interests to make sure they get the finished product

Computing in Clifton?

I am a TRS-80 III and Spectrum user, and I do not know much about programming. I am looking for some people who live in Bristol (preferably Clifton) who know how to program such computers as ZX81, Spectrum, VIC-20, Dragon, TRS-80 III, Oric and BBC, to help me start a club

This club will mainly deal in games and maybe a few business programs, and I hope that as we go along we will be able to open a software library. If you are interested please, please contact me at the address below
Christopher Tihanyi, Basement Flat, 2 Victoria Sq, Clifton, Bristol 8

Don't just blame Rabbit

To begin with, I must say I totally agree with T.M.'s review (HCW 33) of the VIC-20 game, Paratroopers

I know I am right in saying that it is nobody's idea of fun to slaughter defenceless figures and watch and enjoy their descent to the ground, even if they are only made-up characters

But I do think it is a little unfair for us to make Rabbit (the company producing Paratroopers) the only scapegoat for this "blow 'em all up and get the points" type of game.

After all, when you come to think of it, aren't nearly all the games out nowadays connected in some way to "killing"? Whether it's zapping, munching flattening or just disintegrating, it's still the same, isn't it?

Perhaps this is a worse example than most, but it's an unavoidable fact that you are committing the accused "sin" when you play games like Scramble, Galaxion and so on

On the same page there was another game very similar to this one — only you bomb ships instead — entitled Harrier Attack,

which received four stars

I am not saying I approve or disapprove of these games. I am merely trying to emphasise that Paratroopers is not the only one of its kind

Secondly, I think the children of today have enough to worry about — what with the wars we hear about every day — without computer tapes of this kind

Finally, I would like to say that in my opinion HCW is, minus the odd thing like this, the best computer magazine on the ever-expanding home computing book shelf. Keep it up!
Luke Jacobson, aged 12, London SW 15

★ Software winner

Life, death and micro games

Now that I have had time to get over T.M.'s review of "Paratroopers" in the October 18th issue I am able to see its funny side

In fact, I can even compliment the reviewer on the first four lines of his review. By saying "This is one of the best examples of user-defined graphics that I have ever seen, along with excellent sound effects" he reflects accurately some of the best qualities of the game

It is after this that he seems to lose sight of them by indulging himself in his own curiously narrow ideas of morality

Confrontation, life and death are the "meat and drink" of computer games. No one takes them seriously, or the idea of humans being involved

On the same page as the "Paratroopers" review are four others involving humans. Three feature confrontations which are exclusively human, and one is "Harrier Attack" which to some people might bring back memories of a real human conflict

So, why is T.M. the only reviewer to feel that this kind of game is immoral? The game players don't seem to share his views either, because "Paratroopers" is already a best seller

A reviewer has a responsibility, both to the game manufacturers and whoever reads his review, which should take precedence over his own personal views. He is there to evaluate each game on its technical merits, and not to treat readers to his feelings about Martians, monsters, helicopters or anything else

In this case responsibility seems to have been shot down in favour of prejudice and self indulgence. How could any game, however dire, be worth only 0% for playability and value for money? Is this a trend? Can we expect to see "Phoenix" reviewed by the RSPCA in your next issue? And "Planetoids" reviewed by the UFO Society? Or, is it just a one-off?

Heather Lamont, Rabbit Software, Harrow, Middlesex

Not so private lines - 1

On the Micro Tips page of HCW 31, Andrew Turek gave a tip called Private Lines which he says makes it impossible to break into a program without a code word

I entered his sequence into one of my Data programs, following his instructions carefully.

I did indeed find that entering anything other than the code word would not gain access, but being a fairly pessimistic sort, I looked for other ways to break in and eventually found one

If you type a false code word, then press ENTER, and very quickly SHIFT and BREAK together you get LBREAK. From there, ENTER or LIST will let you into the program.

Row Rickwood, Gillingham, Kent

Not so private lines - 2

Nice try, Andrew Turek (Private Lines, HCW31), but not quite good enough. By using SHIFT 6 you can get a Report H STOP in INPUT. However, by disabling the error report by adding a line POKE 23613, 215 you can make the program very inaccessible without the keyword.

Here is how I would use Andrew's program, not forgetting to reset the ERR SP back to normal in the first line of your program with POKE 23616,84

```
1 POKE 23613,84
10 PRINT AT 10,5;"YOUR SECRET PROGRAM"
30 PAUSE 0
9995 POKE 23613,255
9996 FOR c=1 TO 3:CLS:PRINT "access keyword please?":INPUT LINE x$:IF x$=s$ THEN GO
```

```
TO 999 8
9997 NEXT c:NEW
9998 CLS:GO TO 1
9999 SAVE "secret" LINE
9995
```

Remember to enter your keyword as a direct command, using LET s\$="word or symbol" then SAVE by GOTO 9999
Alan Gee, Grantham, Lincs.

Take ten lines...

A few lines seem to have been missed out of my Astro Gallery game for the TI-99/4A, published in HCW 35. The missing lines are

```
1050 C=20
1060 C2=10
1070 CALL HCHAR(R,C,144)
1080 CALL HCHAR(R2,C2,144)
1090 V=R
1100 V2=R2
1110 W=C
1120 W2=C2
1130 X=INT(RND*4)+1
1140 N=N+1
```

Tony Garner

...And one more

Someone must have spirited away line 40110 from my Halloween adventure in HCW 31. It should read 40110 DATA KITCHEN,0,2,0,0

Alan Blackham

Tip typo

Thank you for publishing my tip for finding memory locations on the VIC-20 in HCW. However, I have found a small typing error crept in, for which I must apologise. The amended line is below.

```
LN FOR CH=0 TO CN
READ C$:C=(ASC(C$)-64)*8+7168
LN FOR CS=0 TO 7:READ CQ:POKE C+CS,CQ:NEXT CS,CH
```

where LN = line number(s) and CN the number of characters to define

Also, in a long program, it is better to split the original line into two as shown.

Again the matching DATA line would be as
LN DATA "X",123,234,0,34,62,1,3,0
David Shepherdson, Ilkley, West Yorks

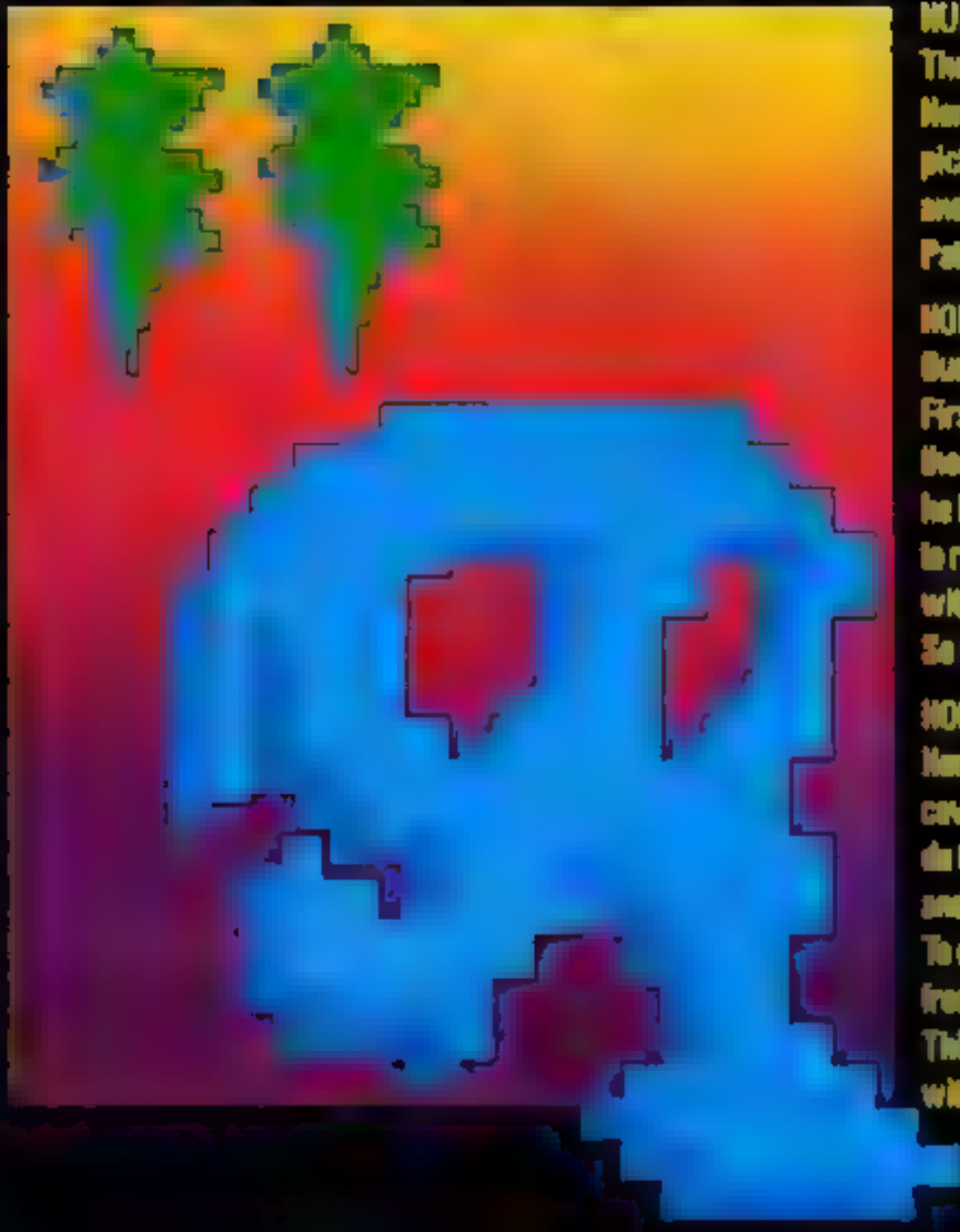
HERE COMES HORACE!

Just when you thought microcomputer games had nothing more to offer, here comes Horace! It has been said that Horace games are in a class of their own: in fact, Horace is almost a legend.

Horace is a cute, lovable, animated character who races through adventures, creating havoc wherever he goes, and the good news is that Horace games are now available for most microcomputers.

When Horace was first introduced to computer owners in the game "Hungry Horace", he immediately became a cult figure, winning the hearts of thousands of computer owners. Now, you too can enjoy the hair-raising adventures of Horace.

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HUNGRY HORACE

The original Horace adventure. Horace creates havoc in the park as he picks the flowers, annoys the guards and steals their lunch. Patently ridiculous, but great fun.

HORACE GOES SKIING

But here attempts winter sports: First of all he must get to the ski shop, then lumbered with a pair of skis, he has to dodge the traffic once again to reach the snow. Skiing is complete with slalom flags, trees and moguls. So watch out, Horace!

HORACE AND THE SPIDERS

Horace's task is to rid the mountain caves of spiders. But before he can do that he must climb the mountain and reach the dreaded spider bridge. To cross it, Horace must swing from spider thread to spider thread! This game is challenging and fun with some amazing animation.



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SOFTWARE REVIEWS

Special Mission TI-99/4A (Extended BASIC) £5.95

Temptation Software, 27 Cinque Ports Street, Rye, Sussex

Special Mission is a text-only adventure game set in an industrial complex. Your task is both to discover and accomplish the objective of your mission by issuing instructions.

The computer can understand sentences of up to five lines in length, although this may sometimes result in a memory full error, a small technical point adequately described in the instructions.

Exploring the complex is achieved by going east, west etc, but you may ask for help when it is required.

Various objects are, of course, to be found with which you can gain access to different parts of the complex, including a crazy camera which not only has the irritating habit of playing invader bashes, but sticks its tongue out at you!

The set-up of the adventure is the same each time that it is run, but your progress depends on having obtained various items and disposed of others in appropriate places.

Since there is no option to SAVE when you have reached a certain point, therefore, the ultimate solution to the adventure is difficult to achieve except perhaps for the more experienced player. **J.W.**

instructions	90%
playability	65%
graphics	0%
value for money	70%



Master Chess 48K Spectrum £6.95

Mikrogen, 24 Agar Crescent, Bracknell, Berks

Programs of this complexity never cease to amaze me. A fully implemented chess program at

this price has to be excellent value.

Good graphics, 11 levels of play, options to set up particular games, recommended moves from the computer when you get stuck, and a clock to prove to you just how slow you are: the list of features is seemingly endless.

The program is superbly idiot proof, which is just as well when I'm playing. Even on the simplest

It's the thought that counts...

...With these games of logic and strategy. Our reviewers give their verdicts

level, it's fascinating to use the computer's recommended moves and analyse why it recommends them.

I'm not sure how a Grand Master would react to this program, but for ordinary mortals who want to practice, improve or simply learn, together with the Spectrum, this program makes an ideal partner.

You can't make illegal moves, you're never hurried by an impatient human, and even if you

get stuck, you can get some help quickly.

A superb example of a real application for a home computer. Also available under the Sincor label through Psion. **D.M.**

instructions	95%
playability	100%
graphics	100%
value for money	95%



Castle Adventure Dragon £6.95

Virgin Games, 61-63 Portobello Road, London W11 3JD

An adventure game written in BASIC, set in and around an old castle.

As the hero, your quest is to recover the staff of Ganroth and to return to the safety of the drawbridge, which is where the game begins.

There are more than 120 locations and over 100 objects to examine, so the main aim is to have to take its word for that.

Several clues are contained on the insert, which also tells you that you can go N, S, E, W, up and down. After that, you are on your own to discover what actions are permitted.

As with most adventures the game is text-only.

There are some unusual objects to be found as you wander through the castle, and a variety of traps prevent you from fulfilling your objective.

Some of the comments made me smile, but others got on my nerves. I played the adventure many times and was disappointed to find that the various objects were always in the same places.

Having played many other adventure games, I found this one lacking in comparison, chiefly because there is no random element.

I would not, therefore, recommend it to a dedicated adventure game player. **J.F.M.**

instructions	70%
playability	60%
graphics	0%
value for money	50%



Global Rescue TI-99/4A (Extended BASIC) £7

Stanless Software, 10 Alstone Road, Stockport, Cheshire SK4 5AH

The earth is threatened by an evil genius, the Shadow, using Eagles 1 to 4, which are an aerial flying carrier, spacecraft and submarine, in strategic deployment. You must attempt a Global Rescue.

The screen displays a world map, the status and current position of each Eagle, and the game starts with the first of a series of disasters. A rescue must be made by despatching the appropriate Eagle in time.

The length and complexity of play are determined by fuel supplies of the Eagles, cargo

capacity limit and clue target. The catastrophe limit, 1 to 10, is the number of current disasters which, if unanswered, will bring the game to an end.

The clue target is the number of rescues, 1 to 99, which must be effected before the tail of the Shadow is revealed. Once this is destroyed the game is won.

At the start, you have the option of selecting one of four skill levels, automatically determine the parameters of play. Alternatively, you may select them yourself, which gives pieces of difficulty levels to explore.

A well designed and fully documented game which makes a refreshing change from zapping aliens. **J.W.**

instructions	100%
playability	90%
graphics	80%
value for money	100%



Lojix 48K Spectrum £5.95

Virgin Games, 61-63 Portobello Road, London W11

This is a puzzle program which will appeal to all those who can do the Rubik cube without thinking.

Even though it is in two dimensions, instead of Rubik's

cube, it is a frustrating and difficult task.

On loading, the screen displayed a set of control instructions in the top left, quarter a 10 by 10 grid below them and a set of regular shapes on the right half of the screen.

Each of these shapes can be rotated and the object of the game is to place all of them on the grid like a jigsaw.

Response is fast, the display is clear and easy to understand and

the options you could want are supplied and are easy to use. Instructions are also supplied on the 5.25 inch cassette.

Unfortunately, I am old enough to remember this game's predecessor, called Polynomias, and played with low-tech card or cardboard shapes. However, I prefer Lojix, as the pieces do not get clogged out of position or lost.

For every game sold, 50p is put to the bank. The first sender of a solution will win the lot. A game

for the linker, and I'll bet it will be a while before the cash is won. **R.F.**

instructions	92%
playability	75%
graphics	50%
value for money	80%



I wrote this program to teach myself how to use PLOT and DRAW — it draws squares, triangles and circles of any size, anywhere on the screen

When you run the program, instructions and a menu will be shown. After choosing and drawing your shape, you can choose another one

The screen doesn't clear between shapes, but it will clear if you add 101 CLS to the listing. You may also find it useful to use a pixel pad to help you design the shapes

By adding colour, a tune and questions about the shapes you could expand the basic idea into a useful educational program for children

While reading chapter 17 of the Sinclair manual, I noticed that a small, but necessary instruction had been left out, which could be confusing for newcomers to computing

The manual doesn't tell you what wherever the draw command finishes is now the 0,0 position of the pixel graph. So PLOT 50,50 DRAW 50,0 DRAW 0,50 DRAW -50,0 DRAW 0,-50 will draw a square

Get your Spectrum into shape

Learning to use the PLOT and DRAW commands? Joan Rollason wrote this short program to help you

How it works

20-60 sets up variables
70-80 instructions and menu
90-230 menu direction
350-490 input and draw instructions for square
500-700 input and draw instructions for triangle
750-950 input and draw instructions for circle

Main variables

u 0-175
a 0-255
r 0-255
These variables are the pixel positions, length of sides and radius measurements



```

10 REM J.Rollason June 1983
20 REM squares,triangles,circle
*
30 FOR u=0 TO 175
40 FOR a=0 TO 255
50 FOR x=0 TO 255
60 LET u=0
70 PRINT AT 3,6;"This program
enables you to draw squares,triangles
and circles any size and any
position on the screen.The pixel
position asked for is the bottom
left hand corner or as in the
circle the centre.There are two
pixel co-ordinates type one then
enter then type the other.If you
get the answer integer out of
range and you do not wish your
shapes to disappear,Enter GO TO
100."
80 PRINT AT 16,6;"Press s for
Squares": PRINT AT 18,12;"t for
Triangles": PRINT AT 20,12;"c for
circle"
90 PAUSE 1000:CLS
100 LET s=1:LET t=2:LET c=3
200 INPUT "Which would you like
";u
270 IF u=1 THEN GO TO 350
300 IF u=2 THEN GO TO 500
320 IF u=3 THEN GO TO 750
350 INPUT "Enter pixel position
";a;" ";u
370 INPUT "Enter length of side
";x
400 REM square
450 PLOT a,u: DRAW x,y: DRAW y,
x: DRAW -x,y: DRAW y,-x
490 PAUSE 100: GO TO 100
500 INPUT "enter pixel position
for triangle ";a;" ";u
550 INPUT "Enter length of side
";x
600 REM triangle
650 PLOT a,u: DRAW x,y: DRAW -x
/2,x: DRAW -x/2,-x
700 PAUSE 100: GO TO 100
750 INPUT "enter position of ce
ntre of circle ";a;" ";u
800 INPUT "Enter radius";x
850 REM circle
900 CIRCLE a,u,x
950>PAUSE 100: GO TO 100

```

Micro Tip

In command Spectrum

Where Series 3 Spectrums cause problems with existing software, I have an easy solution — provided that the program is written in BASIC

For example, the following line
10 PRINT IN 57342 GOTO 10
will give the result 255 with Series 1 and 2 machines and 191 with Series 3 machines

On each occasion that an IN command is needed, a preceding OUT command will reset the bits set by the ULA. For example:
10 OUT 57342,255 PRINT IN 57342:GOTO 10
will give 255 with both issue 1, 2 and 3 machines.
So the solution is quite simple — precede any IN n command with an OUT n,255 command, and any BASIC program will work on any Spectrum
W. Smith

Micro Tip

Verify your Dragon

One of the main problems on the Dragon is the lack of VERIFY command. It is most infuriating to have typed in and CSAVED a long program, only to find that it has been lost on CLOAD with an I/O error because it has not SAVED

A way to overcome this problem is to CSAVE "PROG", rewind the tape then type SKIPF "PROG" and enter. The micro will then search through the program to the end of "PROG" where it will either print OK or I/O Error

If the latter then you can make the necessary adjustments to record levels and try again. The advantage of this method is that while you are experimenting with different recording levels etc, your program remains in the computer's memory intact.

A. Lee-Bentley

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Pip the farmer to the post

Try to escape with the fruit before that farmer catches up with you. Stuart Lenker explains how to play his apple-picking game for the standard TI-99/4A

- How it works**
- 85-95 variables set-up
 - 100 clears screen
 - 105 sets screen colour to black
 - 110-120 sets text to white
 - 125-150 define colours
 - 155-185 define characters
 - 186 do you want instructions?
 - 190-205 displays screen border
 - 210-265 displays orchard
 - 270-320 displays random positions of apples
 - 325-370 displays random position of key
 - 375 displays man
 - 380-525 main game loop
 - 380-520 count down farmer's movement along rows
 - 385-390 & 510 control farmer's movement along columns
 - 395 checks keyboard
 - 400 clears old player from screen
 - 405-440 check for movement
 - 445-470 check new screen positions
 - 475 displays new player
 - 480 adds one to time limit
 - 485 tests to see if time limit is exceeded
 - 490-495 check new farmer position
 - 500-505 move farmer
 - 515 displays basket
 - 530-540 you fell over a basket
 - 545-555 you touched the electric fence
 - 560-570 you picked up an apple
 - 575-605 you picked up the key
 - 610-615 you have run out of time
 - 620-650 the farmer has caught you
 - 655-690 you escaped
 - 705-725 losing tune
 - 745-755 displays message
 - 760 print score
 - 770 end
 - 805-895 display instructions
 - 915-925 type in time limit

An apple a day might keep the doctor away, but what about the farmer that owns the orchard? As you run around the orchard picking up apples, he's on your trail, picking up the fruit you've missed and dropping baskets to block your escape. If he catches up with you, he'll prosecute you for trespassing on his land.

- Main variables**
- X column of figure
 - Y row of figure
 - SC score
 - T/U positions of apples
 - GB number of apples
 - B/P position of key
 - R/C movement directions for farmer
 - M positions for baskets
 - LIMIT time limit
 - K position for gate
 - CS screen messages

You move by using the four arrow keys with the alpha lock button down. Mind you don't trip over a basket, or touch the edge of the orchard — it's protected by an electric fence. When you've collected the apples, the only way out of the orchard is to pick up the key

```

10 REM APPLE SCUMPIGAR
20 REM BASKET LEADERMAN
30 REM BARRIJUST 1968888
40 T=22
50 T=14
60 SC=0
70 CALL CLEAR
80 CALL SCREEN 2
90 FOR I=1 TO 8
10 CALL COLOR 1 10
110 NEXT I
120 CALL COLOR 11 15 1
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7140 CALL COLOR 713 15 1
7150 CALL COLOR 
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Programs to fill the software gap

Is there life in software between the Space Invaders and the financial planners?

Horoscopes 32K BBC £5.95

Third Program, 189 Cheddon Road, Taunton, Somerset

If you list this program, you'll find a plea not to copy it as the author is trying to earn a living from it. I'm afraid that on the basis of this piece of his work he's likely to starve to death.

It's a long program, not be-

cause it's complex, merely because it contains lots of text in print statements

All it does is ask for your name, birthday and sex, then print the appropriate star sign text. Thus there are only 24 different outputs, any of which you could find in the cheapest books on horoscopes

The only features I can think of worth mentioning are that it does validate the date you give — if June 32 and you get the response

I Ching Dragon £6.95

Virgin Games, 61/63 Portobello Road, London W11 3DD

Well, at least this is an original program!

It is totally unlike any other I have come across — not a game, but based on the 4,000-year-old Chinese oracle known as I Ching

The sleeve notes say "Its philosophy reflects Taoist and Confucian ideas". While I am unable to confirm or deny this claim, I find it hard to believe that a few predetermined statements, randomly selected by pressing the space bar will really shed light on "the unconscious and inner self"

This is one of the first Dragon offerings from Virgin and comes with an extending cassette inlay, a

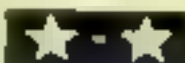
novel feature of which is a profile complete with photo of programmer James Bressini

I didn't manage to load from side 1, but side 2 loaded every time. A neat auto-running intro displays the Virgin logo followed by the title page

The program is written in BASIC and uses most of the Dragon's free memory to store the large amount of text required

On balance, I would think Chairman Mao's little red book is probably more interesting and better value for money than this

instructions	60%
ease of use	70%
display	50%
value for money	40%



Diet 48K Spectrum £5

L. C. Dunbar, 14 Ribble Close, Culcheth, Warrington

What with suspicion growing that home computers are only used by small boys for playing Space Invaders, Diet is a particularly timely arrival on the scene

The program is menu (sic)

driven, and quite straightforward to use

Details of each ingredient of your chosen recipe are fed in one by one. When you've done that, the program works out the calorie content of the dish, and the fibre content too if you like

However, to use the program, you will need standard calorie and fibre content charts and, of course, your recipe book

The program also works out the calorie and fibre content per

person served, and allows you to experiment with different ingredients — for instance, to reduce the calories or increase the fibre content

Results are displayed in neat, easy-to-read analyses with no graphic gimmicks

Other features are tips on alternative, less fattening ingredients, and an option to print out hard copy of your recipe details — useful for sticking in your cookbook or for reference

during food preparation

A useful addition to the Spectrum library, which could find applications at school as well as at home

instructions	75%
ease of use	75%
display	70%
value for money	80%



Stargazer Secrets 48K Spectrum £5.95

CRL, 140 Whitechapel Road, London E1

This is an attempt to provide a serious horoscope calculation facility

The program arrived with an attractive cassette insert containing meagre instructions.

However, after loading — a lengthy process — the program prompts in a very user-friendly way for the name, birthdate, time of birth and global position longitude and latitude

There is a wait of approximately two minutes, then a natal chart of, what is to me, meaningless squiggles appear

This is followed by some information and an outline of your

character

In general, this BASIC program is well presented, although one or two unprofessional techniques are used, and was written following astrologically accurate methods by Chris Somerville, a member of the Astrological Association.

In itself the program worked well — it gave me a glowing report — although as is said in the text, it is a limited forecast due to memory restrictions.

My wonder is, who will buy it?

Once run, its function is completed, and the only other use could be parties or fund-raising as suggested. But it strikes me as a bit too serious for these applications.

instructions	67%
ease of use	88%
display	74%
value for money	49%



"twit"

It does also have the option of a printed output; mind you, the program hangs if you select it when there's no printer.

I don't often find a program to which I'm prepared to give either a five star or a one star rating. However in this case I've no hesitation

It is a prime example of the type of program to which the com-

puter sceptic points and says "Why on earth do you need a computer to do that?"

instructions	80%
playability	20%
display	60%
value for money	10%



Spectadraw 2 48K Spectrum £12.95

B. S. McAlley, 1 Cowleaze, Chinnor, Oxford OX9 4TD

The aim of this program is to give you around 30 per cent more chance of forecasting football matches which will produce a draw, to boost your chances of winning the pools. As far as I can see from reading the manual and examining the listing this is done statistically.

The program was supplied with a four-page booklet and I followed the instructions meticulously. It took me three hours to set up the program and then it crashed — I think a misplaced bracket at line 4140 was to blame at least on my copy. But if there is one error

At last, using an alternative

entry method, I had the program working. I used David Nowotnik's forecasting program, published in HCW26, for comparison, and a random selection as a control. The week I used for my experiment produced 14 draws — all three systems forecast four correct draws

Easy to use, but time-consuming. Fairly clear screen displays, although I would have liked to have the last two teams entered displayed when creating the match list

But at this price, I would stick to the birthdays method

instructions	91%
ease of use	32%
display	87%
value for money	10%



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Don't head for the stars!

An unexpanded VIC is all you need to play my Voyager game. The aim is to pilot your rocket through space, avoiding the stars, then dock with the mothership to regain lost fuel.

As the game starts, you will find yourself in the middle of the screen, which scrolls upwards. Detailed instructions and controls are given in the program. Happy voyaging!

Hints on conversion

Converting this program should be fairly easy. The main job is to change the POKES to suit your micro

In line 550, POKE 218, 158 scrolls the screen down instead of up by tricking the computer into thinking the next line is not a continuation of the first

POKE 36878 is a volume control and POKES 36874, 36875 and 36876 are all sound and tone controls. The POKES "number", "letter" are all involved in POKEing characters to the screen

On some computers, such as the TRS80 or Video Genie, the GET AS IF AS "THEN..." will have to be changed to A=INKEY\$

The special symbols in the print statements are colour and cursor controls

You're on an obstacle course in space with Kulvinder Bhupal's game for the unexpanded VIC-20



Main variables

- SC score
- F fuel
- Hi hi-score
- S star location
- Ms mothership location
- L rocket location
- NS hi scorer's name

How it works

- 100-400 sets up screen and instructions
- 550-800 main loop
- 550 makes screen scroll upwards
- 560 POKES your rocket to the screen
- 600-601 POKES stars, Motherships at random positions
- 615 checks which key is being pressed
- 660-680 checks if rocket has crashed. Checks if run out of fuel. Checks if you docked with mothership
- 900 crash routine and hi-score

```

10 REM: VOYAGER ***
20 REM: BY K B BHUPAL
100 PRINT " SCORE = 0"
110 PRINT "*****VOYAGER*****"
120 PRINT "*****BY K B BHUPAL, AU-83 *****"
130 FOR I=1 TO 5000 NEXT I, S= 00000
200 PRINT "*****VOYAGER*****"
300 POKE 36878 : PRINT "OBJECT BEGINS TO AVOID THE STARS"
310 PRINT "AS YOU PROGRESS YOUR SCORE WILL INCREASE BUT BEWARE"
320 PRINT "YOUR FUEL IS ALWAYS GETTING LOWER"
330 PRINT "YOU THEN HAVE TO DOCK WITH THE MOTHER SHIP"
340 PRINT "THIS WILL GIVE YOU ONLY 50 UNITS OF FUEL"
350 PRINT "YOU HAVE ONLY 300 UNITS GOOD LUCK !!!"
360 PRINT "USE B <-LEFT >-RIGHT"
370 PRINT "*****IT A KEY!"
380 GOTO IFAS= THEN 300
400 PRINT "*****"
410 L=7000
500 POKE 30
510 PRINT "HIT F1 TO BURST OFF"
520 GOTO ,FAS= THEN 520
530 TIS= 00000
540 PRINT "***** POKE 218 158 POKE 36878 16 POKE 36877 00"
550 POKE 30 POKE 22 162
600 PRINT "AD 422 4782"
610 PRINT "AD 422 4782"
620 IF TIS= 00000 THEN POKE 185 POKE 195 TIS= 00000
630 POKE 42
640 GOTO
650 IFAS= " THEN GOTO 1
660 IFAS= " THEN GOTO 1
670 PRINT "SC HI SCORE HI"
680 SC=SC+1 F=F-1
690 IF PEEK(L-22)=42 THEN GOTO 500
700 IF PEEK(L-22)=185 OR PEEK(L-22)=195 THEN F=F+50 POKE 36879 25 POKE 36879 8 FOR I=1 TO 20 NEXT I
710 IF F=0 THEN PRINT "YOU RAN OUT OF FUEL ! " DOTO 1000
800 DOTO 550
900 POKE 36878 8 POKE 36877 0
910 POKE 36878 15 POKE 36877 150 FOR I=1 TO 5000 NEXT POKE 36878 0
1000 PRINT "*****O-U C-R-A-S-H-E-D*****"
1010 PRINT "YOU SCORED " SC FOR I=1 TO 5000 NEXT I
1020 IF SCORE HI THEN PRINT "TYPE YOUR NAME " INPUT NS
1030 PRINT "HI SCORE HI"
1040 PRINT "*****MOTHER SHIP *****"
1050 IFOR= " THEN 80
1070 PRINT "***** POKE 36879 27 END
    
```

Micro Tip

oric

Make space

Ever written a program for the Oric and found you could do with more text space?

Here are two tips. First you can use the top line reserved for SAVING/LOADING/CAPS messages.

To do this you have to POKE into this area of screen RAM, from 48000-48039 decimal. The subroutine below enables you to put a title on this line

```

1000 REM * Prints a title on the top
1010 REM * line in TEXT/LORES modes
1020 REM * needs TIS (your title) -
1030 REM * max. 40 letters
1040 AD = 48000
1070 FOR X = 1 TO LEN (TIS)
1080 TI% = ASC(MID$(TIS,X,1))
1090 POKE AD, TI%: AD = AD + 1: NEXT: RETURN
    
```

If you want a coloured title add:

```

1050 IF B = 8 THEN POKE AD, B + 16: AD = AD + 1
1060 IF F = 8 THEN POKE AD, F: AD = AD + 1
    
```

Define F and B as the fore-and background colours (0-7). Use F, B = 8 if you want a 40-letter title. For tidiness, use this line to delete the title before using CSAVE, CLOAD or CTRL T:

```

FOR X = 48000 TO 48039: POKE X, 32: NEXT
    
```

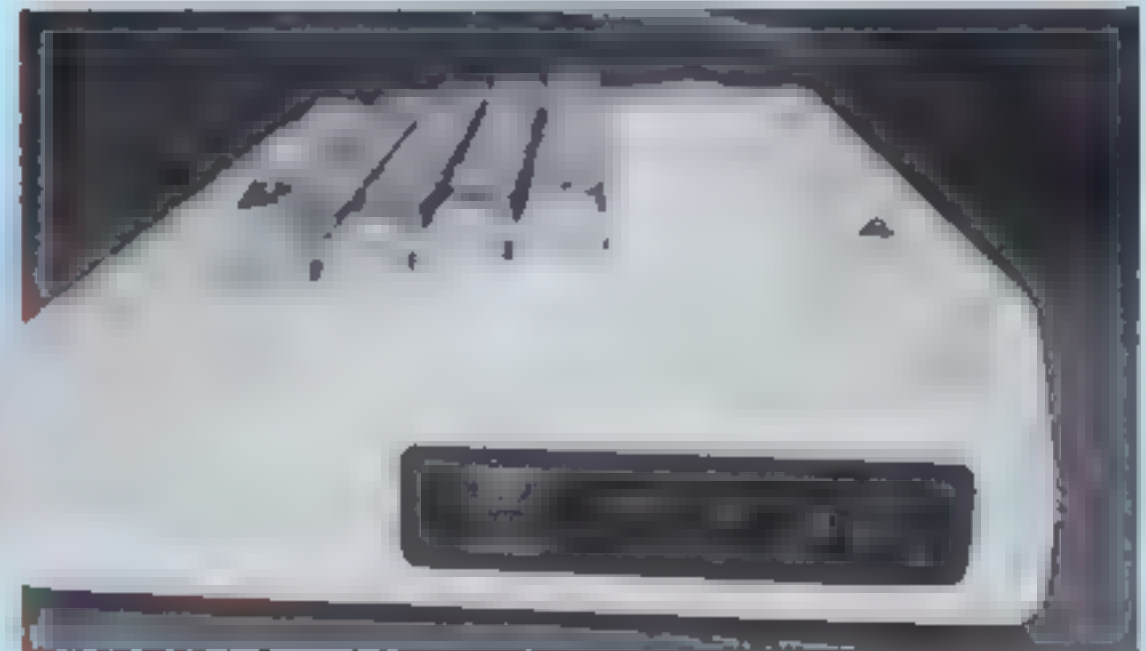
Secondly, use the two columns normally protected for the PAPER and INK attributes.

To do this type of CTRL or? CHR\$(29) (in programs) or to avoid toggling problems (see HCW18) use POKE 618, 43.

The text will be in white or black and you cannot use PAPER or INK.

If you do, the first two columns of text will be deleted! These two methods increase your text area from 38 x 27 to 40 x 28.

Andrew Mewham



Battle Tanks TI-99/4A £6

Stainless Software, 10 Alstone Road, Stockport, Cheshire SK4 5AH

This is a two-player game for those with a bellicose nature.

You each have three tanks and the aim is to destroy your opponent's hardware.

Dividing you and your opposite number is a series of walls which you can batter down with your shells — up to three walls before your salvoes fall short and you are forced to advance.

Control of your respective tanks is through either the split-keyboard or the joysticks, each being scanned alternately. So it would seem that the player who can keep his/her finger 'on the button' continuously might eventually be the victor.

The choice is not made clear in the embedded instructions, but is provided in the cassette inlay.

The program does remind you to make sure that the troublesome alphalock key is depressed before you commence battle.

The graphics are not dazzling and the instructions are printed slowly, but luckily you don't have to endure them each time round, unlike on some programs.

While it might appeal to children it is too boring for adults, and really needs something to spice it up in order to make it worth its price tag. **P.B.**

instructions	50%
playability	90%
graphics	50%
value for money	40%



Tank Battle TI-99/4A (Extended BASIC plus Joystick) £5.95

Temptation Software, 27 Cinque Ports Street, Rye, Sussex

With five skill levels, described as being from "strategy to desperation", you may well imagine that with Tank Battle you're in for a tough time.

Enemy tanks appear in random formation from the right and top of the screen. Using your tank at the bottom of the screen you must stop five (not 10, as it specifies in the instructions), of the enemy from infiltrating your lines to

reach their objective, your H.Q.

You have only three lives with which to do so. Your movements are restricted to east or west, and range of fire is limited to the upper half of the screen, so some fast reactions and judgement are required to keep out the enemy.

For each enemy tank hit, points are awarded, the aim being to attain a high score.

There are also facilities to interrupt play, or changeover joysticks without having to CLEAR

and re-RUN.

Such features show that as much consideration has been given to the overall presentation of the program as to the play itself. **J.W.**

instructions	75%
playability	90%
graphics	90%
value for money	100%



Lunar Base/ Torpedo Fire TI-99/4A £7

Stainless Software, 10 Alstone Road, Stockport, Cheshire SK4 5AH

Leaving the safety of the mothership, you must guide your lunar pod through the asteroid belt to a lunar base standing above a marsh. After landing, your pod must immediately return to its mothership.

On lift-off the base disappears, leaving only marsh. Manoeuvres continue for as long as you have pods, scoring with each successful move.

When all landing bases have disappeared a new, more difficult set up is given and the game progresses.

Unfortunately there is one bug in what would otherwise be a crashproof program — an IN-

CORRECT STATEMENT IN 4340 turned out to be a typing error.

Torpedo Fire sends you down through oceanic depths to a submarine. Here you take charge of a five-position gun with which to torpedo war and cargo ships as they pass across the surface.

There are five classes of vessel, worth different points, and in each game 25 ships. At the end of a run your score and accuracy are displayed.

Left and right movements are controlled by the cursor keys.

Both games have good graphics and sound. Neither is disadvantaged by the inevitable slowness of TI BASIC. **J.W.**

instructions	90%
playability	70%
graphics	80%
value for money	80%



Space Rescue 2.0 TI-99/4A (Extended BASIC) £11

PS Software, from Stainless Software, 10 Alstone Road, Stockport, Cheshire SK4 5AH

The instructions to Space Rescue 2.0 give a full scenario of the game, which is set in the 21st century.

In brief Earth has been robbed of the space factories and lunar mines which provide its energy. Using the last 10 landers aboard their mothership, you must penetrate the defences of the Xyohians to gather as many power pods as you can.

The pods are placed on three pylons at the bottom of the screen. Each lander is released from the mothership, guided past the crossing alien defences to land

on the pylon, then returned to the ship.

Once all the pods have been collected, the action becomes progressively more difficult as defences are increased.

This lasts through four screens, after which the mothership returns to Earth. The game then restarts at a higher skill level.

Control of the landers is either by joystick or keyboard.

As the ladder is moved continuously in one direction it starts to accelerate. To counteract this the direction must be reversed until stopped. This makes manoeuvring more difficult than in a straightforward dodging game. **J.W.**

instructions	100%
playability	80%
graphics	95%
value for money	70%



Galactic Gunfight TI-99/4A (Extended BASIC) £10

By Intersoft, from Stainless Software, 10 Alstone Road, Stockport, Cheshire SK4 5AH

Yes, it's time to take on those aliens again, this time in a

Galactic Gunfight.

Before the game starts, you are given the option of using joystick or keyboard. If the keyboard is selected, you can then decide which of the three keys you want to use for moving the starfighter up and down, and to fire.

Next comes the level of difficulty, which is set from the laser firing time and can be from one to 100 seconds. Twenty is regarded as "Super Pro".

Play then starts, as you attempt

to blast the aliens which appear in squadrons of five.

Since you only have a limited time in which to dispose of your attackers, some strategic play is called for.

Any time remaining when you have destroyed a squadron will be required when the next arrives, particularly as this moves twice as fast.

There is a limit to the number of times your laser can be fired in succession. More than two rapid

bursts will result in overheating for which a cooling period is required, which wastes time.

Quite a good game, made that much better by having such a range of difficulty levels. **J.W.**

instructions	100%
playability	100%
graphics	60%
value for money	60%



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ONE CHILD'S VIEW

It's not all fun and games for junior micro fans

I decided to write to you with my opinion after hearing more and more about how computers are taking over, and how more and more parents are, to my surprise, starting to react against their children using them

The use of home computers by school children is often looked upon with disapproval by adults. The reason for this seems to be fairly obvious — most adults think of us being glued to our television sets, zapping up evil aliens or eating power pills to our heart's content.

I am speaking for many others of my age group when I say that this comment is not only unfair but also untrue

A great number of children do possess computers — in fact, it is probably true to say that the majority of computer sales over the past few years have been made to us youngsters.

However, although a few do use their machines solely for the purpose of playing games, a great many others appreciate the need for a computer not so much for the present, but for the age to come — the computer age.

None of us can get away from the fact that when us kids leave school, and start work, our jobs will be dominated by computers. The computer will be able to take over jobs that previously took hundreds of workers to do.

Those of us who can already operate, or are at least familiar with these machines will have a definite head start on the rest — a head start that could prove to be invaluable to us. I am sure that no-one can deny that fact.

So although, yes, we all enjoy a good computer game on our micros from time to time, most children (and some parents) do realise that learning to program and operate computers in our spare time now can save us a lot of time, and gain us a better start in our future career — something that surely no-one wants to deprive us of.

So please, next time you see youngsters buying a micro, don't discourage them. Stop and think that in all probability they will have a better chance than most in the computer age that is to come — or is it here already?

Paul C. Smith
 Schoolchild computer user, aged 15
 Cheam,
 Surrey

● This space is for you to sound off about the micro scene, to present bouquets or to hurl brickbats. Share your views by sending them to Paul Lipioti, Opinion, Home Computing Weekly, 145 Charing Cross Road, London WC2H 0EE. Please include your occupation and your interest in computing.

Find the key to the highway

The object of this text-only game is to drive your starcar along galactic highways, travelling from service area to service area in order to collect clue letters.

The letters make up an anagram of a code word chosen at random from a list in the program. To win, you have to solve the anagram.

How it works

- 1,2 instructions, set variables
- 3-10 selects codeword
- 20-45 checks route for service areas
- 49-105 reads route, gives warning of hazards, contains treasure chest, pirates and space flu routines
- 200-210 turning left
- 250-260 turning right
- 300-320 time warp routine
- 400-550 route compiler
- 1050-1060 magnetic storm routine
- 1152-1160 gamma radiation routine
- 1200-1220 breakdown routine
- 1500-1600 meteor storm routine
- 1700-1760 black hole routine
- 1800-1860 interchange routine
- 3000-3070 makes anagram of code word, gives one letter at a time
- 4000-4990 services and bonus routine
- 5000-5040 status report
- 6000-6040 status checker
- 6900-7010 guess the code word routine

Along your way, you are likely to meet many hazards - meteor storms, black holes, magnetic disturbances, even pirates! You'll have to take evasive action as instructed on screen.

Time warps are likely to dump you either backwards or forwards a few stages.

Your car breaks down a lot but luckily you can join the RAT or AVI to service it. And you can always pull off at a junction.

There's a rough ride ahead of you when you set off to find the hidden code word. Foster Richardson briefs you on the details of this unusual game for any Spectrum

```

1 RANDOMIZE : PRINT AT 3,11,"
STARCAR"; AT 4,11,"-----"
DRIVE THE GALACTIC HIGHWAY""
DISCOVER CODE LETTERS AT
SERVICE AREAS"" SOLVE THE ANAGRAM TO FIND"" THE SECRET CODE WORD!!!"" INSTRUCTIONS GIVEN IN"" THE GAME (PRESS "F" FOR"" STATUS, &"G" TO GUESS WORD)"""" PRESS "ENTER" TO BEGIN"" : PAUSE 0: CLS
2 LET zero=0: LET cash=400: LET fit=100: LET crew=50: LET fuel=200: LET fac=0: LET vb=0: LET p$=""
3 FOR n=1 TO INT (10*RAND+1): READ w$: NEXT n
4 DATA "north","south","east","west","compass","barrier","longitude","latitude","gyroscope","sextant"
5 LET lc=LEN w$: LET o=1: DIM J(lc)
6 CLS
10 GO SUB 400
20 LET cou=1: LET ser=0: PRINT "SERVICES AT STAGES:"
25 IF a$(cou)="v" THEN PRINT cou: LET ser=ser+1
27 LET cou=cou+1
30 IF cou>101 THEN GO TO 25
35 IF ser=0 THEN PRINT "NO SER
    
```

Variables

- fuel, crew self explanatory
- fit % strength of starcar
- fac,aa indicate membership of motoring organisations
- w\$ code word
- a\$ stores route
- cas number of casualties in space flu routine
- jum stages jumped in time warp
- i intensity of meteor storm
- di distance from black hole
- la lane number
- p\$ letters of code word anagram
- pr price of fuel crystals

At the service areas, you can refuel with either hi-octane or lo-octane (beware!) fuel. There is also a bonus box, which might contain extra crew, cash, fuel and so on.

This is not an easy game to win, and there are many ways to close. All the instructions are contained in the game - and while travelling you can press s for a status report or g to guess the code word.

Starcar uses a lot of memory, so before loading, it's best to clear out LDs and the like by entering

```
CLEAR PEEK 23732 + 256 * PEEK 23733
```

Hints on conversion

- The program should adapt quite easily to other computers. A few points to note
- POKE 23692,255 this makes the screen scroll on and off without stopping with "scroll?"
- STR\$ changes a number into a string
- CHR\$ is applied to a number, and gives the single character string whose code is that number. If your computer doesn't use the ASCII codes you will have to amend lines 1530 and 1720.

VICES"

```

30 PRINT : PRINT
40 LET cou=1
47 IF cou=101 THEN GO TO 3
48 IF cou>95 THEN GO TO 50
49 LET n=cou
50 IF a$(n)="x" OR a$(n)="b" OR a$(n)="l" OR a$(n)="g" THEN PRINT FLASH 1;"HAZARD WARNING"; HEAD 0;" : n=cou+1; STAGES AHEAD"; PAUSE 40: GO TO 50
55 LET n=n+1: IF n=101+5 THEN GO TO 60
58 GO TO 50
60 IF INKEY$="s" THEN GO SUB 4
990
62 IF a$(cou)="x" THEN PRINT "HIGH LEVEL GAMMA RADIATION"; PAUSE 20: GO TO 1152
63 IF a$(cou)="i" THEN PRINT "ROAD JUNCTION TO LEFT (5 TO TAKE)"; PAUSE 40: GO TO 200
64 IF INKEY$="g" THEN GO SUB 6
900
65 IF a$(cou)="r" THEN PRINT "ROAD JUNCTION RIGHT (5 TO TAKE)"; PAUSE 40: GO TO 250
67 IF a$(cou)="d" THEN PRINT FLASH 1;"BREAKDOWN..."; GO TO 12
    
```

```

88
70 IF a$(cou)="b" THEN PRINT "METEOR STORM"; PAUSE 20: GO TO 1500
75 IF a$(cou)="h" THEN PRINT "BLACK HOLE"; PAUSE 20: GO TO 1700
80 IF a$(cou)="l" THEN PRINT FLASH 1;"TIME WARP"; GO TO 300
85 IF a$(cou)="v" THEN PRINT "SERVICES"; PAUSE 20: GO TO 400
90 IF a$(cou)="j" THEN PRINT "INTERCHANGE"; GO TO 1800
92 IF a$(cou)="g" THEN PRINT "MAGNETIC DISTURBANCE"; PAUSE 20: GO TO 1050
94 IF a$(cou)="f" THEN LET i=INT (RAND*90+10): LET cash=cash+i: PRINT INVERSE 1;"LUCKY FIND"; TREASURE CHEST CONTAINING "STAR TOKENS"; PAUSE 20: GO TO 100
95 IF a$(cou)="p" THEN LET cas=INT (cash*.25): LET crew=crew-cas: PRINT FLASH 1;"PIRATES!"; FLASH 0;" THEY KILL 10 CASH ANDS TEAL MOST OF YOUR CASH"; PAUSE 20: GO TO 100
    
```


SPECTRUM PROGRAM

```

95 IF a$(cou)="U" THEN LET cas
=INT (RND*10+1): LET crew=crew-c
a$: PRINT INVERSE 1;"SPACE FLU
";cas;" CREW SICK": PAUSE 20
GO TO 100
98 PRINT "ON ROUTE": PAUSE 2
0: GO TO 100
100 LET cou=cou+1
101 LET fuel=fuel-1
102 GO SUB 3000
105 POKE 23592,255 GO TO 47
200 IF INKEY$="8" THEN CLS: PR
INT AT 10,9: FLASH 1;"TURNING LE
FT": FOR n=1 TO 15: BEEP .05,20*
RND: NEXT n GO TO 8
210 GO TO 100
250 IF INKEY$="8" THEN CLS: PR
INT AT 10,9: FLASH 1;"TURNING RI
GHT": FOR n=1 TO 15: BEEP .05,10
*RND: NEXT n: GO TO 8
260 GO TO 100
300 LET jum=INT (20*RND)
305 IF cou<=20 THEN LET cou=cou
+jum: PRINT "YOU HAVE BEEN THROU
";jum;" STAGES FORWARD": G
O TO 320
310 IF cou>20 THEN LET cou=cou-
jum: PRINT "YOU HAVE BEEN THROU
";jum;" STAGES BACK":
320 FOR n=-20 TO 40 STEP 4: BEE
.01,n: NEXT n: GO TO 105
400 LET s$="$$$$$$$$$$$$$$$$$$$$
$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$": LET cou=0
405 IF s$=0 THEN PRINT "YOU A
RE APPROACHING STAR ROUTE AT TH
E START OF YOUR JOURNEY
VOYAGE": LET s$=1
407 PRINT "SLIP ROAD"
410 LET cou=cou+INT (RND*3+1):
IF cou>100 THEN PRINT "TADP...!"
"YOU ARE ON": INVERSE 1;"ROUT
E": INT (RND*10000): RETURN
420 LET sel=INT (RND*50)
430 IF sel<11 THEN LET s$(cou)=
"t": GO TO 410
440 IF sel<23 THEN LET s$(cou)=
"r": GO TO 410
450 IF sel<26 THEN LET s$(cou)=
"b": PRINT "phul....": GO TO 41
0
460 IF sel<29 THEN LET s$(cou)=
"b": PRINT "splutter...": GO T
O 410
470 IF sel<32 THEN LET s$(cou)=
"t": PRINT "brb...": GO TO 41
0
480 IF sel<35 THEN LET s$(cou)=
"t": GO TO 410
490 IF sel<38 THEN LET s$(cou)=
"j": GO TO 410
500 IF sel<41 THEN LET s$(cou)=
"t": GO TO 410
510 IF sel<44 THEN LET s$(cou)=
"q": GO TO 410
520 IF sel<47 THEN LET s$(cou)=
"r": GO TO 410
530 IF sel<48 THEN LET s$(cou)=
"p": PRINT "kerchuna...": GO T
O 410
540 IF sel<49 THEN LET s$(cou)=
"u": GO TO 410
550 LET s$(cou)="x": GO TO 410
1050 PRINT " - THIS CAUSES I
NSTRUMENT FAILURE AND YOU ARE
BURNING UP FUEL. IN ORDER TO
PROCEED YOU MUST SOLVE THE FOLL
OWING TECHNICAL PROBLEM": LET
g=INT (RND*3): LET i=INT (10*RND
D+1): LET s=INT (10*RND+1)
1055 IF g=0 THEN LET u=r+s: PRIN
T "WHAT IS ";r;" TIMES ";s;"?"
1055 IF g=1 THEN LET u=r*s: PRIN
T "WHAT IS ";r;" PLUS ";s;"?"
1055 IF g=2 THEN LET u=r-s: PRIN
T "WHAT IS ";r;" MINUS ";s;"?"
1052 INPUT "ANSWER?";v
1054 IF v<>u THEN PRINT "WRONG -
S FUEL UNITS PENALTY!": LET f
uel=fuel-5: GO TO 1052
1055 PRINT "CORRECT": PAUSE 20
GO TO 100
1152 LET d=INT (2*RND)
1155 IF d=0 THEN PRINT "...BUT Y

```

```

OUR SHIELD IS SOUND AND THERE HA
VE BEEN NO CASUALTIES"
1150 IF d=1 THEN LET e=INT (10*R
ND+1): LET crew=crew-e: PRINT "
...AND YOUR SHIELD IS LEAKY AND T
HERE HAVE BEEN ";e;" CREW MEMBER
S INJURED"
1160 PAUSE 20: GO TO 100
1200 IF fac=1 THEN LET fac=0: PR
INT "LUCKY YOUR IN THE R.A.C."
... PAUSE 20: GO TO 100
1210 IF s=1 THEN LET s=0: PRIN
T "GOOD JOB YOUR IN THE R.A."
... PAUSE 20: GO TO 100
1220 LET rep=INT (RND*100+10): L
ET cash=cash-rep: PRINT "YOU HAV
E TO PAY ";rep;" STAR TOKENS FO
R REPAIRS": PAUSE 20: GO TO 10
0
1500 LET j=INT (RND*8+4)
1510 PRINT " - INTENSITY ";j;"
1520 PRINT "FOR EVASIVE ACTION P
RESS THE SPECIFIED KEYS"
1525 LET j=0
1526 POKE 23592,255
1530 LET s$=STAR$ (INT (RND*10))
1535 IF j=1 THEN PRINT INVERSE
1;"STORM PASSED": PAUSE 20: G
O TO 100
1540 PRINT "PRESS ";s$": BEEP .
5,40: PAUSE 50
1550 IF INKEY$=s$ THEN LET j=j+1
: BEEP .5,10: BEEP .5,30: GO TO
1530
1570 PRINT : FLASH 1;"HIT!":
BEEP .5,-10: BEEP .5,-20
1575 LET fil=INT (fil*(1-1/40))
1580 PRINT "STRENGTH=";fil;"%"
1590 IF fil<=0 THEN PRINT FLASH
1;"DEAD": STOP
1600 GO TO 1520
1700 LET d1=INT (RND*7+3)
1710 PRINT "-DISTANCE=";d1;" PAR
SECS" "TO OVERCOME GRAVITATIONA
L ATTRACTION PRESS SPECIFY
ED KEY"
1720 LET q$=CHR$ (INT (RND*26+27
)): PRINT "PRESS ";q$": PAUSE 1
00
1721 POKE 23592,255
1730 IF INKEY$=q$ THEN LET d1=d1
+1: BEEP .5,20: BEEP .5,30: GO T
O 1745
1740 LET d1=d1-1: PRINT INVERSE
1;"CLOSER": BEEP .5,-20: BEEP
.5,-30
1745 PRINT "DISTANCE=";d1;"
1750 IF d1=13 THEN PRINT FLASH 1
;"ESCAPED": GO TO 100
1755 IF d1=0 THEN PRINT FLASH 1;
"IT GOT YOU!": STOP
1757 LET fuel=fuel-5
1760 GO TO 1720
1800 LET l=INT (RND*6+5): LET c
h=INT (RND*(l+1))
1820 PRINT "CHOOSE YOUR LANE - T
HERE ARE ";l;" AND ONE OF THEM
HAS BEEN MINED BY HOSTILE REBE
LS"
1830 INPUT "WHICH LANE?";ch1
1840 IF INT (ch1<>ch1 OR ch1<1 OR
ch1>l) THEN GO TO 1830
1850 IF ch1=ch THEN PRINT INVERS
E 1;"BANG...CLASH...SPLATTER..."
: STOP
1855 PRINT "LUCKY BLIGHTER!!!"
: GO TO 100
3000 IF o=le+1 THEN PRINT "YOU'V
E HAD THEM ALL!": GO TO 100
3010 LET n=INT (le*RND+1)
3020 FOR n=1 TO le
3030 IF j(n)=h THEN GO TO 3010
3040 NEXT n
3050 PRINT FLASH 1;"CODE LETTER
";s$(h)": PAUSE 20
3055 LET j(n)=h: LET o=o+1: LET
p$=p$+s$(h)
3070 GO TO 100
4000 PRINT "HI OCTANE FUEL @ 3 T
OKENS EACH" "LO OCTANE @ 2 TOKE
NS EACH"
4010 INPUT "DO YOU WANT TO BUY ?
(y/n) ";y$

```


SPECTRUM PROGRAM

```

4020 IF y$="n" THEN GO TO 4100
4030 INPUT "HI OCTANE OR LO ? (h
/ l) " ; y$
4040 INPUT "HOW MANY CRYSTALS ?
" ; no
4050 IF y$="h" THEN LET pr=0: GO
TO 4070
4060 LET pr=2
4070 IF no+pr>cash THEN PRINT "Y
OU CAN'T AFFORD THEM !" : GO TO
4010
4080 IF y$="h" THEN LET cash=cas
h-no+pr: LET fuel=fuel+no: PRINT
"O.K." : GO TO 4100
4082 LET fu=INT (RAND*3)
4084 IF fu=2 THEN PRINT "SORRY -
SOLD OUT!" : GO TO 4100
4086 LET fuel=fuel+no: LET cash=
cash-no+pr: PRINT "O.K."
4100 INPUT "DO YOU WANT A CLUE L
ETTER OR OPEN THE BONUS BOX ?
(c/b) " ; y$
4110 IF y$="c" THEN GO TO 3000
4120 LET bo=INT (RAND*5)
4130 PRINT "YOUR BONUS IS....."
4140 IF bo=0 THEN PRINT "RAC MEM
BERSHIP" : LET rac=1
4150 IF bo=1 THEN PRINT "RA MEMB
ERSHIP" : LET ra=3
4160 IF bo=2 THEN PRINT "FREE RE
PAIRS TO YOUR SHIP" : LET fit=1
00
4170 IF bo=3 THEN LET ne=INT (AN
D*10+1): PRINT ne; " NEW RECRUITS
" : LET crew=crew+ne
4180 IF bo=4 THEN LET ne=INT (AN
D*200): PRINT ne; " STAR TOKENS"

```

```

: LET cash=cash+ne
4190 PAUSE 50: GO TO 100
4990 CLS : BORDER 8: PAPER 8: IN
K 7: CLS
5000 PRINT "          STATUS
-----"
"CREW          " ; fuel; " FUEL
OF           " ; cash; " CRYSTALS"
LENGTH       " ; crew; " FINAN
MEMBERSHIP   " ; fit; " %" ; " MEMBE
"LETTERS LEFT " ; LEN #*-LEN P#
5010 IF rac=1 THEN PRINT AT 15,1
5; "R.A.C."
5020 IF ra=1 THEN PRINT AT 15,15
; "R.A."
5030 INPUT "PRESS ENTER TO CONTI
NUE"; LINE d$
5040 CLS : BORDER 7: PAPER 7: IN
K 8: CLS : RETURN
6000 IF cash<0 THEN PRINT FLASH
1; "CAN'T PAY WAGES - CREW MUTINY
" : STOP
6010 IF fit<0 THEN PRINT FLASH 1
; "STARCAR DEFUNCT!" : STOP
6020 IF fuel<0 THEN PRINT FLASH
1; "NO FUEL!" : STOP
6030 IF crew<=0 THEN PRINT FLASH
1; "NO CREW!" : STOP
6040 RETURN
6990 INPUT "WHAT IS YOUR GUESS ?
(LITTLE LETTERS) " ; g$
7000 IF g$=# THEN PRINT FLASH 1
; "YOU DID IT!" : STOP
7010 PRINT FLASH 1; "WRONG!" : B
EEP .5,-30: BEEP .5,40: RETURN

```

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BEST SELLERS

Top Ten programs for the Spectrum

1	Flight Simulation	Psion (1)
2	Ant Attack	Quicksilva (5)
3	Lunar Jetman	Ultimate (2)
4	Zzoom	Imagine (4)
5	Pool	CDS (6)
6	Oracles Cave	Doric (-)
7	Kong	Ocean (3)
8	Scrabble	Psion (-)
9	Terror-Dakti!	Melbourne House (-)
10	Hobbit	Melbourne House (-)

Compiled by W. H. Smith. Figures in brackets are last week's positions

TOP 30

1	Jet Pac	Ultimate	Spectrum (2)
2	Manic Miner	Bug Byte	Spectrum (1)
3	Trans-Am	Ultimate	Spectrum (3)
4	Zzoom	Imagine	Spectrum (6)
5	Horace and the Spiders	Psion	Spectrum (23)
6	Kong	Ocean	Spectrum (28)
7	Cookie	Ultimate	Spectrum (4)
8	Killer Gorilla	Program Power	BBC (-)
9	Jumpin' Jack	Imagine	Spectrum (25)
10	Hall of the Things	Crystal	Spectrum (22)
11	Splat	Incentive	Spectrum (18)
12	Cuthbert Goes Walkabout	Microdeal	Dragon (15)
13	Cuthbert in the Jungle	Microdeal	Dragon (12)
14	Krazy Kong	Anilog	VIC-20 (9)
15	Psst	Ultimate	Spectrum (11)
16	3D Combat Zone	Artic	Spectrum (5)
17	Chuckie Egg	A & F	Spectrum (7)
18	Johnny Reb	Lothlorien	Spectrum (8)
19	Horace Goes Skiing	Psion	Spectrum (10)
20	The Hobbit	Melbourne House	Spectrum (-)
21	Frogger	Microdeal	Spectrum (14)
22	Penetrator	Melbourne House	Spectrum (13)
23	Pool	CDS	Spectrum (-)
24	The King	Microdeal	Dragon (-)
25	The Hobbit	Melbourne House	CBM 64 (-)
26	Valhalla	Legend	Spectrum (-)
27	Lunar Jetman	Ultimate	Spectrum (-)
28	Dungeon Master	Crystal	Spectrum (30)
29	Bewitched	Imagine	VIC-20 (-)
30	Hunchback	Superior	BBC (27)

Compiled by PCS Distribution (0264 691211) and sanctioned by the Computer Trade Association. Chart is for retail sales in individual outlets in the UK and Northern Ireland for the fortnight ended November 6

Top Ten programs for the Commodore 64

1	Hover Bover	Llamosoft (6)
2	Crazy Kong	Intercaptor (-)
3	Escape MCP	Rabbit (9)
4	Spriteman	Intercaptor (4)
5	Frogger	Intercaptor (8)
6	Scramble	Intercaptor (3)
7	Annihilator	Rabbit (-)
8	Laser Zone	Llamosoft (-)
9	Tank Attack	Supersoft (-)
10	Grand Master Chess	Audiogenic (5)

Compiled by Boots. Figures in brackets are last week's positions

Top Ten programs for the VIC-20

1	Arcadia	Imagine (2)
2	Catcha Snatcha	Imagine (4)
3	Wacky Waiters	Imagine (3)
4	Escape MCP	Rabbit (6)
5	Skyhawk	Quicksilva (-)
6	Laser Zone	Llamosoft (5)
7	Paratroopers	Rabbit (8)
8	Blitz	Commodore (-)
9	Amok	Audiogenic (-)
10	Matrix	Llamosoft (-)

Compiled by Boots. Figures in brackets are last week's positions

Top Ten programs for the Dragon

1	The King	Microdeal (3)
2	Android Attack	Microdeal (1)
3	Cuthbert Goes Walkabout	Microdeal (4)
4	Frogger	Microdeal (5)
5	Gridrunner	Salamander (-)
6	Shark Treasure	Dragon (-)
7	Mined Out	Quicksilva (2)
8	Storm Arrows	Dragon (-)
9	Grand Prix	Salamander (-)
10	Ring of Darkness	Wintersoft (6)

Compiled by Boots. Figures in brackets are last week's positions

Top Ten programs for the ZX81

1	Football Manager	Addictive (1)
2	Scramble	Quicksilva (5)
3	Flight Simulation	Sinclair (2)
4	Asteroids	Quicksilva (-)
5	1K Games	Sinclair (6)
6	1K Chess	Sinclair (8)
7	Defender	Quicksilva (10)
8	Invaders	Quicksilva (-)
9	Planet of Death	Sinclair (-)
10	Inca Curse	Sinclair (-)

Compiled by Boots. Figures in brackets are last week's positions

MR CHIP SOFTWARE

SPECTRUM GAMES

SPECTRUM DARTS (48K)

Five games of darts for 1-5 players, 501, Cricket, Killer, Round the board, Noughts and Crosses, four levels of play per game, take on the computer or friends at these games of skill and judgement £5.50

WHEELER DEALER

As for the Commodore 64, but now available for the 48K Spectrum, Texas TI99/4A and Dragon £5.50

VIC-20

GAMES AND UTILITIES

JACKPOT

This is it, the ultimate Fruit Machine for the VIC with nudge, hold and respin 100% machine code. "Overall Jackpot is a beautifully written simulation giving superb graphics, animation and use of colour. In fact, this program makes Commodore's Fruit Machine cartridge look unbelievably cheap and nasty." Home Computing Weekly No. 20 19/7/83. £5.50

KWAZY KWAKS

Accuracy and speed are required for this Shooting Gallery, superb use of colour and graphics in this new and challenging game from the author of Jackpot. 100% machine code, joystick or keyboard control. £5.50

PACMANIA

Choose your own game from the following options — difficulty 1-3 speed 1-3, size of maze 1-3, visible or invisible maze, still or moving power pills, define your own key controls, any combination, if this is your type of game, then this is the one for you, for the 3K expand VIC £5.50

BUGSY (Joystick Only)

This is a Minefield with a difference as you step on the stones whilst collecting purple boxes which give your both time and points, they disappear from beneath your feet. DO NOT DESPAIR! "BUGSY" will randomly replace the stones but avoid bumping into him or its sudden death! An original compulsive and challenging game. £5.50

MINI-ROULETTE — PONTOON — HI-LOW

Three great games of chance for the VIC, try to beat the computer, hours of fun, full colour, sound effects and tunes £5.50

DATABASE — create your own files and records on tape £7.50

SUPER BANK MANAGER — A full feature version any memory size, but needs 3K expansion. £7.50



COMMODORE 64

GAMES AND UTILITIES

JACKPOT 64

At last its here, specially written for the 64, by the author of "JACKPOT" the ultimate Fruit Machine program for the VIC £5.50
(available from 1st Nov)

WESTMINSTER

A game for up to four players, can you lead the party of your choice and win the general election, you tour the 60 constituencies (seats) buying votes, when you can, (just like the real thing), this must be one of the first board type games specially written for the computer. Why play on your own, have fun with your family and friends playing WESTMINSTER £5.50

WHEELER DEALER

A game for two to twenty players, become a tycoon of the motor trade, you must obtain gearboxes, tyres and engines to produce cars for sale. Form syndicates, buy and exchange parts, buy dealerships, but be careful, you may become bankrupt and have to liquidate, find out what you are made of, have you got what it takes to become a WHEELER DEALER. £5.50

LUNAR RESCUE

Our new version, avoid the asteroid belt, to rescue the stranded scientists, then fight your way back to the mother ship, fast reactions are required to safely land and dock your lunar module. £5.50

PURCHASE LEDGER

Easy to use, single entry, handles 400 invoices per month, Gross/Nett purchases, V.A.T. £14.50
Disk Version £17.00
(available from 1st Nov)

SALES LEDGER — As Above £14.50
Disk Version £17.00

CHIPMON — Contains a one- or two- pass Assembler, Disassembler and Monitor. A programming aid for the development of machine code programs and routines on the CBM 64 £12.50

BANK MANAGER — As our Super Bank Manager, but for the 64. £7.50
Now available on disc with added facilities. £10.00

Full documentation with all utility programs.

Other software available for the VIC and Commodore 64, send for free brochure, including RABBIT SOFTWARE at £5.50 each.

Send Cheques/PO's to:

MR CHIP SOFTWARE

Dept HCW, 1 NEVILLE PLACE,
LLANDUDNO,
GWYNEDD LL30 3BL. Tel: 0492 49747

Wanted. High quality software, of all types, for export and UK distribution.

All programs now available on disc please allow £2.50 extra.

DEALER ENQUIRES WELCOME

Pack 'em in: ace card games to suit you

Reverse Puzzle

Depending on your skill at cards, you will either solve Reverse Puzzle quickly... or you'll find it quite a struggle.

Twenty cards are dealt face up around the edge of the screen and you have to turn them all face down according to certain rules.

Place the cursor on any card and press the joystick trigger. This will turn the card face down. Count this as one and count to four cards clockwise. Press the trigger again and turn this fourth card face down.

Now move to any other card and repeat the sequence. I give no clue to help you!

Owners of 16k computers should start a new program at this point.

Those with more memory will have noticed the speed of the music getting slower as you add more games. This can be corrected by altering the delay loop in line 8240.

How it works

4000-4060 set up Game 4, draw layout

4080 branch to joystick routine

4100-4410 play routine. Checks are made at various points for a valid move and see if the puzzle has been solved, using variable DONE

4410 PRINT statement is same as the FDS, except last four characters are absent

Special instructions: In the PRINT statements below the letters U D L R, refer to the cursor arrows. To print an arrow use ESC/CTRL/ and appropriate arrow U=Up arrow etc

4010 PRINT statement contains 40 inverse spaces 4015 PRINT title in inverse 4050 prints arrows on screen as a reminder to move clockwise. The first PRINT statement is ESC ESC R SPACE ESC/ESC R Second ESC ESC D D D L ESC/ESC D 4060 first PRINT statement ESC/ESC L SPACE ESC/ESC L Second ESC ESC L D D L ESC/ESC L 4010 PRINT CTRL/Q CTRL/R CTRL R CTRL/E D L L L L inverse vertical line, 2 inverse spaces, inverse vertical line, D L L L L inverse V/Line 2 inverse spaces, inverse V/Line, D L L L L inverse V/Line, 2 inverse space inverse V/line 8109 alter variable GM to read GM (greater than) 4. For all 16k owners, if you are starting a new program then game number will be 1, so GM will have to read GM (greater than) 1

Continuing Les Howarth's series of patience games for any Atari. It doesn't matter if you missed the earlier games. Just type in these listings and play straight away. There will be more next week.

Listing 1 - initialisation and sub-routines. Type this in first

```

10 REM Patience by R.L. Howarth, Nov 82
20 DIM A$(512),B$(30),C$(18),D$(12),E$(8)
30 FOR I=1 TO 4: B$(30)=I: B$(29)=I+1: B$(28)=I+2: B$(27)=I+3: B$(26)=I+4: B$(25)=I+5: B$(24)=I+6: B$(23)=I+7: B$(22)=I+8: B$(21)=I+9: B$(20)=I+10: B$(19)=I+11: B$(18)=I+12: B$(17)=I+13: B$(16)=I+14: B$(15)=I+15: B$(14)=I+16: B$(13)=I+17: B$(12)=I+18: B$(11)=I+19: B$(10)=I+20: B$(9)=I+21: B$(8)=I+22: B$(7)=I+23: B$(6)=I+24: B$(5)=I+25: B$(4)=I+26: B$(3)=I+27: B$(2)=I+28: B$(1)=I+29: B$(0)=I+30: NEXT I
40 I=PEEK(100)-5
40 FOR I=54 TO 51: POKE 53256+I,POKE 53277+I
50 INT=PEEK(134)+PEEK(135)+256: INT=INT/256
60 OFFS=INT*5+1024-ATAB: HI=INT/256: POKE UTAB
70 OFFS=HI*256+POKE UTAB+2: POKE UTAB
80 GOSUB 8200: HI=85: GOTO 8100
90 UNTIL FOR I=1 TO 4: STEP 4: FOR H=1 TO 3: STEP 4: HI=HI+1: POKE 12+HI*4: HI=HI+1: NEXT H
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8970 GOTO
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ATARI PROGRAMS

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724 IF Z=N56 THEN Z=N56
726 IF Y=N34 THEN Y=N34
728 IF Y=N130 AND G=N1 THEN Z=96
730 IF G=N42 THEN RETURN
734 IF Y=162 AND G=N3 THEN Y=162
740 R=Y+35:POKE 53248,Z:RETURN
1000 SOUND N0,255,N10,8:FOR I=N1 TO N52:
NEXT I:SOUND N0,N0,N0,N0:RETURN
1100 FOR I=N1 TO N2:SOUND N0,200:IF PICK=N1
,N10,N4:SOUND N1,200:IF PICK=N2,N10,N
4
1110 FOR H=N1 TO 8:NEXT H:NEXT I:SOUND H
0,N0,N0,N0:SOUND N1,N0,N0,N0:RETURN
1200 U=PEEK(789):FOR I=N0 TO N3:FOR H=N3
TO N10 STEP 0.5:ON G GOTO 1210,1212,12
14,1216,1218,1220
1210 SOUND I,200/(I+G),N12,N12-H:NEXT H
:NE T I:GOTO 1240
1212 SOUND I,240/(I+G),N12,N12-H:NEXT H
:NEXT I:GOTO 1240
1214 SOUND I,N4*(I+G),N2,N12-H:NEXT H:H
EXT I:GOTO 1240
1216 SOUND I,200*(I+G),N10,N12-H:NEXT H
:NEXT I:GOTO 1240
1218 SOUND I,120*(I+G),N12,N12-H:NEXT H
:NEXT I:GOTO 1240
1220 SOUND I,220*(I+G),N10,N12-H:NEXT H
:NE T I:GOTO 1240
1240 FOR I=N0 TO N3:POKE 789,16-[I]:FOR
H=N1 TO N10:SOUND I,N10+[I*6],N12,N10-
H:GM=N6:FOR A=N1 TO N3:NEXT A
1250 NEXT H:NEXT I:POKE 789,U:FOR I=N0 T
O N3:SOUND I,N0,N0,N0:NEXT I
1300 SOUND N0,N10,N0,N4:FOR H=N1 TO N5:IN
E T H:SOUND N0,N0,N0,N0:RETURN
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N1309=N1310,N1310=N1311,N1311=N1312,N1312=N1313,
N1313=N1314,N1314=N1315,N1315=N1316,N1316=N1317,
N1317=N1318,N13
```


You're in charge of the ball and chain

Here's the second part of my Slave Labour game for the unexpanded TI-99/4A. Type it in and find out just how hard a taskmaster you are

Using the D and S control keys your job is to place a ball and chain in the path of a slave to keep him planting crops in the top half of the screen

If three slaves escape you're sacked

Here's part two of Slave Labour, Iain Bartram's novel game for the unexpanded TI-99/4A

How it works

2020 escaping slaves routine
2030-2070 word centring for screen output
2080-2120 rest, return to main program
2130-2200 slave bouncing off walls and off ball and chain in correct direction
2210-2310 planting crop and determine direction of return
2320-2370 scoring
2380-2450 move to next field
2460-2600 end, play again!

```

1990 NEXT I
2000 RETURN
2010 IF SL=3 THEN 2400
2020 FOR W=19 TO 20
2030 CALL HCHAR(W,1,32,32)
2040 NEXT W
2050 GOTO 970
2060 ADIR=-1
2070 IF E=-2 THEN 2100
2080 BDIR=-1
2090 GOTO 1130
2100 BDIR=1
2110 GOTO 1130
2120 IF (B<2)+(B>31) THEN 2130 ELSE 2140
2130 BDIR=-BDIR
2140 CALL GCHAR(A+ADIR,B+BDIR,FL)
2150 IF BL=144 THEN 2170 ELSE 2160
2160 IF A=6 THEN 2170 ELSE 1060
2170 IF A=10 THEN 1060
2180 ADIR=-ADIR
2190 IF B<2 THEN 2240
2200 IF B>31 THEN 2240
2210 IF RAND>.5 THEN 2220 ELSE 2240
2220 BDIR=-1
2230 GOTO 2250
2240 BDIR=1
2250 CALL SOUND(50,-6.5)
2260 ST=SC+A*2-10
2270 K$="SCORE="&STR$(SC)
2280 R=2
2290 GOSUB 1960
2300 IF SC>740 THEN 2310 ELSE 2350
2310 CALL CLEAR
2320 R=8
2330 K$="THIS PLANTATION IS FULL"
2340 GOSUB 1960
2350 R=10
2360 K$="MOVE ALONG TO THE NEXT ONE"
2370 GOSUB 1960
2375 GOTO 960
2380 CALL HCHAR(A,B,144)
2390 GOTO 1140
2400 CALL CLEAR
2410 IF SC>200 THEN 2420 ELSE 2460
2420 R=12
2430 K$="YOUR NOT A BAD TASK MASTER"
2440 GOSUB 1960
2450 GOTO 2490
2460 R=12
2470 K$="YOU CALL YOURSELF A TASK MASTER!"
2480 GOSUB 1960
2481 FOR D=1 TO 50
2482 NEXT D
2490 CALL CLEAR
2500 R=12
    
```

```

2510 K$="DO YOU WANT TO PLAY AGAIN?"
2520 GOSUB 1960
2530 CALL KEY(0,K,S)
2540 IF K=78 THEN 2600
2550 IF K=89 THEN 2570
2560 GOTO 2530
2570 SC=0
2580 SL=0
2590 GOTO 960
2600 END
    
```

Micro tip

Atari

256 colours at once

This interrupt-driven program puts all of the Atari's 256 colours on the screen at the same time

Here's how it works. As well as showing what graphics mode the next line is, the display list can also give interrupt instructions. (An interrupt is a machine code subroutine called during a vertical or horizontal blank on the screen)

When this instruction is found, the computer looks at location 54286.

If it contains 192 it finds the routine to be executed in memory by looking in addresses 513 and 512, high and low memory bytes respectively

Once the interrupt is completed the computer returns to what it was doing before being disturbed.

What my program does is change the colour register in each of the display list interrupts therefore providing 16 colours. The 16 shades of these colours are produced using Graphics 9

```

10 GRAPHICS 9
20 REM FILL SCREEN
30 FOR X=0 TO 79: C=INT(X/5): COLOR C*(X/5)
40 PLOT X,0: DRAWTO X,191: NEXT X
50 REM DISPLAY LIST INTERRUPT MACHINE CODE
60 FOR I=1536 TO 1548: READ D: POKE I,D: NEXT I
70 DATA 72,165,205,141,26,208,24,105,16,133,205,104,64
80 REM PUT INSTRUCTIONS IN DISPLAY LIST
90 DL=PEEK(560)+256*PEEK(561)
100 FOR I=0 TO 15: READ D: POKE DL+D,143: NEXT I
110 DATA 6,16,28,41,53,65,77,89,102,114,126,138,150,162,
174,186
120 REM HORIZONTAL LINES
140 COLOR 0: FOR I=0 TO 191: STEP 12: PLOT
0,Y: DRAWTO 79,Y: NEXT Y
150 POKE 712,0: POKE 512,0: POKE 513,6: POKE 205,0: POKE
54286,192
160 GOTO 160
    
```

The instruction put in the display list is 128 plus its previous contents. For example 15 + 128, giving 143.

Amun Hoque

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